# EDUCATIONAL REVIEW

## *APRIL, 1911*

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## I

## UNIVERSITY ADMINISTRATION IN THE UNITED STATES

What follows is taken, by permission, from the official Minutes of Evidence before the Royal Commission on University Education in London, Thursday, July 14, 1910, and just published in London.

PRESENT:

THE RIGHT HON. R. B. HALDANE, K.C., F.R.S., M.P. (*Chairman*), presiding.
The RIGHT HON. VISCOUNT MILNER, G.C.B., G.C.M.G.
The RIGHT HON. SIR ROBERT ROMER, G.C.B.
Sir ROBERT L. MORANT, K.C.B.
Mr. LAURENCE CURRIE, M.A.
Mr. W. S. M'CORMICK, M.A., LL.D.
Mr. E. B. SARGANT, M.A.
Mrs. CREIGHTON.
Mr. JOHN KEMP, Mr. H. F. HEATH, *Joint Secretaries.*

NICHOLAS MURRAY BUTLER, PH.D., HONORARY D.LITT. of OXFORD and HONORARY LL.D. of CAMBRIDGE, ST. ANDREWS and MANCHESTER, PRESIDENT of COLUMBIA UNIVERSITY, NEW YORK, called in and examined.

4639. (*Chairman.*) President Murray Butler, you have been so kind as to say you would give us some help with our work on this Commission, and there is a particular point which I should like to begin with. We have run up against a problem. We find growing up in this country technical institutions of a very high order, such as the Imperial College of Science and Technology, of which you have heard, and our problem in London is to see whether a University can be

fashioned in so comprehensive a manner that it may include not only academic training in the institutions devoted to that purpose with their pure and applied sides, but also institutions such as the Imperial College which devote themselves specifically to placing higher science in close contact with modern industries. Now the problem has arisen in Germany, as you are well aware, in connection with the administration of the Universities and the Technische Hochschulen, and it has produced a line of demarcation between the two institutions. We are rather anxious, if it can be done, to avoid the sharp German line of demarcation, and one of our objects in asking you to give us your views was to know whether you have had experience in the United States of dealing with this problem and whether you have succeeded in welding the University strictly so called and the Technological High School, in the German sense, into one institution.

*Ans.*—That is a very common problem in the United States and it has been met in substantially one way. To that way there are enough exceptions to indicate what has been the history of the movement. I think that the separation between the older studies in the University and the Technical High Schools in Germany is due to a historic condition which existed also in some measure, but in less degree, in the United States. When the newer scientific studies, particularly on their applied sides—those relating to the applications of chemistry to industry, to mining, to metallurgy, to electrical engineering, to mechanical engineering, to civil engineering in all its forms—began to develop, there was a feeling among the friends and representatives of the older studies that somehow or other these new studies were less worthy and of less educational value than the old, and not much hospitality was shown to them. They therefore tended to develop in Germany, and to some degree in the United States as well, separately, because that was the only way in which they could develop. In my judgment it is now the opinion of some of the wisest observers in Germany that to have forced that separation was a misfortune, and that it would have been for the advantage of the higher education of Germany, and a gain for the development of cultivated men in the field of applied science, as well as for the development of broader-minded men in the field of the older humanities, if the two could have been welded together. In the United States the development took originally one of two forms. Where the traditions were antagonistic to the applications of science to industry, where they were regarded as beneath the notice and sympathy of a college of liberal learning, or of an older-fashioned University, those studies were forced to develop by separate endowment, by separate instruction in ways of their own. Such a feeling no doubt led to the establishment of such an important institution as the Massachusetts Institute of Technology in Boston under the very shadow of Harvard College, for the sole purpose of developing the applied sciences in ways which it was then felt would be impossible within the organisation of Harvard itself. It is interesting to note that one of the last important acts of Mr. Eliot during his long and very distinguished presidency of Harvard, was to support an endeavour to bring about an amalgamation

of Harvard and the Institute of Technology which had now developed separately for nearly 40 years. He felt, for reasons which need not be gone into here, the desirability of that amalgamation, and the fact that he made the attempt to bring it about indicates, I think, that it would have been wise. Dr. Pritchett, the present president of the Carnegie Foundation for the Advancement of Teaching, who was then the very able president of the Institute of Technology, also favoured the amalgamation; and that shows that two men of the highest standing in our educational life in America were convinced that a union of the two rather than their separation was important. In the United States the whole development of the applied sciences was sporadic, until the impulse given by the so-called Morrill Act of 1862, the Act of the Congress of the United States bearing the name of Senator Morrill of Vermont who introduced and supported it. That was an Act making a grant of public lands in each State for the purpose of what was called an Agricultural and Mechanical College and was the first important step in the United States indicating the support of education by the National Government; for in the United States, as the Commissioners know, education is an affair of the States, and the National Government can only approach the subject by indirection. The Agricultural and Mechanical College Grant—the land grant which has since been added to by various subsequent Acts that I need not cite—was accepted by every State in one of two forms: either the State accepted the grant and turned its administration over to an institution already in existence, or it accepted the grant and established a separate agricultural and mechanical college on that basis; so that all over the United States the so-called Land Grant Colleges are in existence either as separate institutions, or as parts of State or other Universities. Some of the most successful form parts of State or other Universities; as at Cornell University in the State of New York, which has a great school of agriculture, engineering and applied science; at the University of Wisconsin, at Madison, Wisconsin; and at the University of Illinois, at Champaign, Illinois. Columbia, which was originally founded as a college of liberal arts, was solicited to establish a Faculty of Applied Science in the year 1864 by a number of brilliant young men who had been trained at the *Ecole des Mines* in Paris. They wished a school on that model. They were able to obtain a small financial support for it, but the authorities of the college at the time looked upon the undertaking with so much, I will not say disfavour, but lack of sympathy, that they made for it most inadequate preparation and provision. Nevertheless it grew, and it is today, as the Faculty of Applied Science, one of the strongest, most distinguished, and most useful parts of the University. There is no difficulty from our point of view in so widening the scope of the University scheme as to offer opportunity for instruction in Applied Science of every form, both as regards research and inquiry at the higher end, as regards the training of technical men in Applied Science, and as regards provision for the exceptional man who wishes admission to undertake a particular and highly specialised piece of work. My own view is, and I think it is the view of most of my colleagues in the United States,

that the inclusion of the Faculty of Applied Science, as we call it generally, in the University, side by side with the Faculties of Liberal Arts and Letters, and Law and Medicine, is of very great advantage in establishing a catholicity of view and in affording a concrete illustration of the interdependence of all these various subjects. We are committed at our University, without dissent, I think, to a development in the strongest possible way of the Applied Sciences both for research, for technical training and for special teaching of all kinds, as part of the University system; and we feel that the historical conditions which gave rise to the separation originally both in Germany and elsewhere will one day, perhaps, be outgrown or departed from as opportunities arise here and there to integrate these various elements of the higher training. I may say also that the integration involves a very considerable measure of academic economy. There are large subjects of instruction which are common to the Applied Sciences, especially on their elementary side, and to other subjects of academic study. The laboratories in Chemistry, in Physics, the museum and instruments in Mathematics, the work in Geology, Mineralogy, and other subjects which are always offered as scientific options to students in the ordinary College or University course, are the studies on which the Applied Sciences must be based and built up. The same men, to some extent, and the same equipment are available for a portion, usually the elementary portion, of the work. There is also, of course, an economy in administration in not having to provide a new staff of administrative officers and the whole of what the French would call the "bureau" for the maintenance and carrying on of a separate institution.

4640. Now, on what you have so lucidly stated, will you let me put a point to you which I will put in the concrete—an imaginary case just to make clear what I mean. Suppose there came to you at Columbia University the representatives of one of the great corporations and said: "Now, we think we can get out of our great product, we will say oil, by-products which would be a source of revenue to us, and what we want is that you should train up for this work a certain number of specialists. We will be content with nothing short of the highest scientific attainments on the part of these men, but we wish to pay them very highly, and it is worth our while to expend money on getting you, if necessary, to make a small special school for that purpose." Would you consider it within the scope of your University work to produce highly-trained specialists *ad hoc*?

*Ans.*—We certainly should.

4641. You would?

*Ans.*—We certainly should, and I may add, as a very interesting fact which just occurs to me, that at one or two Universities—I remember at the moment, the University of Kansas in the Middle West—provision has recently been made by which business men and industrial firms wishing to have a scientific investigation made of certain specific industrial and practical problems have themselves established research scholarships or fellowships in a University, and have brought about the appointment of young chemists or physicians or engineers to go on with

these researches in the University as part of their University work.

4642. Now that brings me to another question which may not be a difficult one to you because, it may be, your system of administration is very different from ours. With us the teachers, as a rule, take a very considerable part in the administration of the University, and the teachers, often with a good deal of justice, have very high notions, and rather abstract notions, about the value of the sciences in which they are eminent, and there is a disposition on the part of many of them to look rather coldly upon the turning of the work which they do and the teaching which they give to the technology of the *Brodwissenschaften* as such. Now with you I gather that the supreme administration of the University is very largely in, I will not say lay hands because in your case I know, and I think my colleagues know, that you filled a professor's chair a long time before becoming the president of the University, but is it not the case that you have got an administration through your trustees and your presidents of a kind which may be described as detached from abstract academic views?

*Ans.*—It certainly is. We believe such an administration to be highly advantageous.

4643. You aim in the United States at placing your Universities under a governance which is not the governance of the teachers?

*Ans.*—That will require some explanation which, if it is opportune, I shall be glad to attempt. I will take Columbia University, which I know best, but I think what I am saying applies *mutatis mutandis* to all important American institutions. The final word and authority rest with the trustees of the University who are in the educational sense laymen. They are the incorporate body who hold all the funds, who make all the major appointments, and whose disapproval would be effective in preventing any proposed departure in policy. On the other hand, all educational initiative lies with the teaching body grouped into Faculties or Boards. The conditions of admission, the conditions of graduation, the length of the programme of study, the extent and variety and character of the teaching and studies leading to any degree, or to any academic distinction of any kind, are prescribed in the first instance by the Faculties. Their conclusions must be concurred in by the trustees if any specific act proposes a departure from existing principles. The statutes of our own University provide that no action by a faculty, changing the conditions of admission or graduation, or the length or character of the course of study, shall become effective until it has been laid upon the table of the trustees, and until the trustees have adjourned at a meeting held after the meeting at which it was so laid on the table, without acting upon it. Of course, that means that the trustees are always advised of new proposals, and may veto them or bring about their alteration if they see fit. They very rarely do this, in our own case. On the other hand, the tendency is so to construe that statute that only matters of real importance are submitted to the trustees at all. If it should be proposed to substitute, for example, in a given programme of study, a certain amount of chemistry for a certain other amount, that would never go to the trustees at all; it would be regarded as a routine edu-

cational matter to be dealt with by the Faculties. If it were proposed, however, so to alter the conditions of admission as to raise or lower materially the age of the incoming student, or so to change the conditions of graduation as materially to decrease or increase the length of the course of study, or to change the relation of the student to the institution in any financial way, such a proposal would have to go before the trustees in order that it might, if they thought wise, be vetoed or amended by them. So while it is true that we provide for the ultimate government by what may be called a non-pedagogical, a non-teaching body, yet in practice the entire original responsibility and all initiative in educational matters rest with the Faculties as such.

4644. I suppose it is true that under your system each body has educated the other so that the friction which otherwise must arise does not arise?

*Ans.*—Yes. As a rule, the system works extremely well and gives almost universal satisfaction. Friction arises occasionally in an institution here and there, but it is almost always due to the injection of some contentious personality: it is rarely due to the actual and necessary conditions.

4645. I perceive, President, that the new world and the old have many points of resemblance. Well, now, may I take it that the type of governance, and I include the professorial element, the teaching element in it, may be said to be universal throughout the Universities of the United States?

*Ans.*—Yes, it is practically universal. Where it differs from that which I have described it will only be in small and inconspicuous Colleges, generally those under control of a religious denomination, and not standing in any very representative relation to the higher education of the country.

4646. Now you notice that with you, you have got a Governing Body of this type which is capable of approaching the problems in this broad way, and in Germany you have got the Ministry controlling the organisation, so that, although there the line of demarcation has perhaps become too marked, still there is a supreme will which is animating those who lay out programmes. In your view, is it essential, in order to get a University of that type, that the Governing Body should be permeated with that spirit and should not be of a purely academic or sectional kind?

*Ans.*—I should dislike to attempt to lay down any principles for others, but I am entirely clear that the rapid development, the greatly increasing strength and the larger public service of the American Universities is chiefly due to the unpaid, unselfish, generous, and highly intelligent service of these Boards of Trustees, usually consisting of devoted and conspicuous graduates of the institution who are only too happy to give it their best service. The secret of the success of this system of academic administration with us is that the trustees and the president view the University as a whole and in its largest public relationships. They rise above the temporary interests of individual teachers, departments, Faculties, or schools.

4647. Now these men, who become, as a rule, eminent either in public life, or in the world of commerce, law, or whatever profession it may be, what type may they be?

*Ans.*—The most conspicuous who occur to me are men who have come to eminence in a learned profession, often in Law, sometimes in Medicine, sometimes in Theology, sometimes in Engineering, or men who are pursuing a strictly business career in commerce or finance, who have kept up their intellectual interest and are keenly devoted to the advancement of the institution from which they have been graduated, and which they wish to serve. I may say, speaking of our own Board of Trustees, which consists of 24 men,——

4648. Twenty-four?

*Ans.*—Twenty-four; membership on the Board is considered, and has been considered for 150 years, to be a blue ribbon in the public life of New York.

4649. Now, do they give much time to the work of the Board?

*Ans.*—The more active trustees are required to give a considerable amount of time. We meet statedly on the first Monday of every month, from October until June, and have a session of perhaps an hour and a half, or two hours. Our three major standing committees on Finance, on Education, and on Buildings and Grounds, which have the functions that their names indicate, ordinarily meet once each month between the meetings of the Board, and they provide the more important business for the Board, usually circulating printed reports in advance of a session of the Board itself, so that members are familiar both with the resolutions to be presented and with the reasons adduced in favour of them by the committee from which they come. No business comes to our Board, except of the most routine character, presented by the President in the discharge of his statutory functions, that does not come from one of the standing committees.

4650. I see; so that really the business is pretty well sifted before it comes to the meeting of the Board, and sifted by a committee. Do the teachers meet the representatives of the Board on these committees?

*Ans.*—The President is the representative of the teachers in those committees, and it is both his duty and his pleasure to make their wishes and proposals fully known. The only exception is when the annual budget is under consideration, and the various departments are requested to submit in writing their requests and recommendations for new appropriations or for changes of appropriation; then the Deans of the several Faculties often meet the committee on Education to present and discuss reports from departments included in their respective Faculties. The Dean of the Faculty of Applied Science comes to that committee meeting, which is held in December in each year, to explain any changes which his colleagues in the Applied Science Faculty and himself may wish. The Dean of the Faculty of Medicine does the same. Otherwise, the representative of the teaching body is the President, who is a member of every teaching body, and its chairman.

4651. Now, I have only two more questions that I want to ask you. I take it, that Finance is entirely in the hands of the Board of Trustees?

*Ans.*—Absolutely.

4652. And I take it further that the President presides?

*Ans.*—No; not at Columbia.

4653. (*Lord Milner.*) Is he a member of the Board of Trustees?

*Ans.*—Not always *ex-officio,* but the custom of our University is to elect him, and I am a trustee, and my predecessors have all been trustees. At Harvard, the president is *ex-officio* a member of the Corporation and he is the chairman as well. It is usual, I am bound to say, in the United States—that is going too far; it is not usual, it is common, for the president to be the chairman; but, perhaps because it is my own experience, I rather prefer my position sitting at the left of the chair with freedom to take the floor to explain any point or answer any question. I feel I have somewhat greater freedom than I should have in the chair.

4654. But this is not a general rule; sometimes the President is chairman of the Board of Trustees?

*Ans.*—Yes; at Cornell, at Yale, and at Princeton, the President is, I think, chairman, and President Eliot, of Harvard, has stated in his book on university administration that he regards it as very important that he should be chairman.

4655. Are there any other members of the Teaching Body on?

*Ans.*—No.

4656. (*Mrs. Creighton.*) How are the trustees chosen?

*Ans.*—The original trustees of our College were named in the Charter of 1754, and their successors are chosen by co-optation. Three years ago the trustees themselves passed a resolution saying that they would elect to each of six vacancies, as they occurred, such persons as might be nominated to them by the organised alumni of the institution, and that system has so far gone into operation that two trustees have so been chosen. Eventually, when it is fully in operation, six of the 24 may be chosen on the formal nomination of the organised alumni, in order that the alumni may feel that they have not only representatives on the Board of Trustees, but that they themselves have a voice in choosing some members of the Governing Board.

4657. (*Chairman.*) Do your alumni meet in some sort of organised body, a convocation of some sort?

*Ans.*—Not in convocation, because they are scattered all over the world; there are alumni organisations in perhaps 50 or 60 places in the United States and in Europe. Wherever 25 or more happen to be living in the same community they are very apt to form a little association, and if there are 25 of them they have one vote for a member of the Board of Trustees.

4658. But they do not meet annually or biennially or anything of that kind?

*Ans.*—The New York alumni meet often because they are very numerous. They meet two or three times a year in a social way, and perhaps have a lecture or something of that sort.

4659. But their meetings are not recognised as part of the constitution of the University?

*Ans.*—Oh no, that is all social.

4660. (*Sir Robert Morant.*) Will you explain quite briefly the relation of what has been called the Departments to the Faculties? For instance, perhaps you might first make it clear how many Faculties there are and what they are called; I ask to get it on the notes?

*Ans.*—You mean in our own University?

4661. Yes.

*Ans.*—We have first the Faculty of Columbia College, which is the old original College of Arts and Science leading to the Baccalaureate degree, which was founded by King George II. in 1754 and is the parent stem out of which and from which the whole University has developed. That is the so-called Undergraduate Faculty. We have a Faculty of Law, a Faculty of Medicine, a Faculty of Applied Science, a Faculty of Education (Teachers College)—which is what you would call a Training College in the University—which are the four professional advanced Faculties for the training of professional students in Law, Medicine, Applied Science, and Teaching. We then have the three non-professional graduate or research Faculties: Political Science, which includes History, Economics, and Public Law; Pure Science, which includes the Mathematical, Physical, Chemical, Geological, Biological and other sciences in their higher reaches; and Philosophy, which is what is left of the old German Philosophical Faculty, which includes, with us, Philosophy proper, Psychology and Letters, that is Philology and Letters, the languages and their Literature. Then there is a Women's Undergraduate Faculty, the Faculty of Barnard College which is parallel to the Faculty of Columbia College, the Undergraduate College for Women, in which the instruction is separate. In addition, there is a Faculty of Pharmacy, a professional Faculty, recently included in the University.

4662. Then there are four professional Faculties and four undergraduate Faculties with the Faculty for Women, five non-professional Faculties, roughly speaking. Does that mean that the teachers who belong to the four professional Faculties have nothing to do with the teaching of what we call the undergraduates?

*Ans.*—Not quite, Sir Robert, some persons belong to two or even three Faculties.

4663. Some students?

*Ans.*—Some professors.

4664. But I mean as such; the Faculty of Law as such?

*Ans.*—The Faculty of Law as such has no member who sits in any other Faculty, but the Faculty of Political Science has three or four members who are also assigned to sit in the Faculty of Law. The Public Law Professors sit in the Law Faculty as well as in the Faculty of Political Science. A number of professors have seats both in the Faculty of Pure Science and in that of Applied Science.

4665. But the members of the Faculty of Law, as such, are there in-

asmuch as they teach, if I may use the phrase, postgraduates, and do not teach undergraduates?

*Ans.*—Yes.

4666. And conversely, the members of the non-professional Faculties, as such, teach undergraduates and do not teach what I may call postgraduates?

*Ans.*—No; the members of the non-professional Faculties teach only graduate students, except that now and then a professor may offer a single undergraduate course, perhaps.

4667. The non-professional Faculties are?

*Ans.*—Only for graduate students; they must all have the B.A. degree before they are accepted.

4668. Then you call it the undergraduate Faculty of Columbia College.

*Ans.*—That is the undergraduate Faculty, having charge of the College. The three non-professional graduate Faculties, Philosophy, Pure Science, and Political Science, only accept students who have a B.A. degree from some College, our own or some other.

4669. As I say, the professional Faculties as such.

*Ans.*—They take students on different bases. Law only takes students with the Baccalaureate degree; except that undergraduates in Columbia College may, if they choose, take the first year of the Law course as their last undergraduate year. In Medicine we have what is called the combined course; our students are admitted to the professional course after two years of liberal study in our own College or some other.

4670. Yes; I was thinking of men, not courses; members of a Faculty as such. Faculty, I understand, means a body of men who are teachers?

*Ans.*—A Faculty is a group of professors constituted by the trustees to take charge of a given school or schools. For example, the Faculty of Law has charge of the Law School; the Faculty of Applied Science has charge of the Schools of Mines, Engineering and Chemistry.

4671. In that sense those teachers teach only graduates, and do not teach undergraduates?

*Ans.*—In that sense they only teach graduates. But this may happen; suppose a professor of Chemistry is appointed. For instance, we have 20 or 25 professors, associate professors, assistant professors and instructors in Chemistry; if a man were appointed in the department of Chemistry for his competence in teaching engineering students, and not because of any special capacity he might have shown for research in Chemistry, he would be assigned to the Faculty of Applied Science only, and he would be set to teach engineering students.

4672. Undergraduates?

*Ans.*—Undergraduates from the engineering point of view.

4673. Yes?

*Ans.*—If, on the other hand, he were a chemist of a high type with capacity for research, he would probably be assigned both to Applied Science and to Pure Science, and he would divide his teaching between students in classes who were going forward to an Engineering degree, and individual students who were going on for research and ad-

vanced study in Chemistry. It would all depend upon his fitness and preference.

4674. But in respect of both those functions he is a member of the Professional Faculty. There is not a horizontal division amongst the teachers of the University—these are all teaching graduates and these are all teaching undergraduates?

*Ans.*—There are some who teach only graduates and there are some who teach only undergraduates; there is a considerable number in the middle group who teach both graduates and undergraduates.

4675. Those who teach undergraduates only, are in the undergraduate Faculty?

*Ans.*—Yes.

4676. And only those. Therefore the prestige is to be in the graduate Faculty and not in the undergraduate Faculty?

*Ans.*—Unfortunately that has been the case, but we are trying very hard, by increasing the compensation of undergraduate teachers and by adding to their dignity and prestige in various ways, to make it clear that we put as high a value upon first-class teaching of this kind as we do upon research and investigation. We hold that the two things are different, but we should hesitate to make it appear that we wanted to subordinate either to the other, lest we should in the long run only get poor and second-rate men to do the undergraduate teaching.

4677. Exactly, because it does look a little, at first sight, as if you divorce opportunities for research from the men who teach undergraduates?

*Ans.*—We have not done that as a rule, when the undergraduate teacher was also a competent investigator, but where we have done it we have done it with our eyes open.

4678. And regretfully?

*Ans.*—Not always, because there is a good deal of ambition for research which is not backed by genuine capacity, and there is no more dismal sight than an institution filled with men who are yearning for the unattainable, and unhappy because their intellectual limitations will not allow them to get it. And while you cannot always persuade a College teacher of that, yet some of the wisest of my colleagues are proud and happy in their position as undergraduate teachers, and they know that if they were spared for a hundred years they would never make any great original contribution to Philosophy or Philology or Physics. Of course, all these men are constant and profound students. I am using the word "research" in a very special and restricted sense.

4679. Now, on that discrimination of terms, keeping up the standard of the University, in whose hands lies the power of discrimination, saying so-and-so is not good enough to be in this kind of Faculty, and so-and-so is only good enough for the Undergraduate Faculty?

*Ans.*—That is never done in any formal manner so that one could say where the power lies. The individual professor concerned has most to do with it.

4680. But is not that the key to the whole situation?

*Ans.*—That is the key, but what really happens is this; perhaps I may

illustrate by a concrete case; a large department like Mathematics, for example, meets and elects its chairman and its secretary.

4681. We have got a new word now, a department?

*Ans.*—A department is a body of teachers of a given subject all through the University.

4682. Irrespective of the Faculty?

*Ans.*—Irrespective of any Faculty.

4683. They cut right across?

*Ans.*—Yes. Mathematics is a department with members belonging to at least five Faculties—those of Columbia College, Barnard College, Teachers College, Applied Science and Pure Science. English is a department; so are Physics, Mining, Physiology, &c. That department of Mathematics we will say would consist of 20 men; four or five of them are teaching engineering students and doing nothing else; three or four of them are teaching undergraduate students in the Arts and Sciences, and doing nothing else; and some, perhaps three or four, have entirely research and advanced work. What happens is that they really settle amongst themselves, by their own sense of fitness and competence, where each one will best fit into their own departmental scheme. When a vacancy arises the department will come to the president and say, "The kind of man we want now must be a man who is a first-rate man in the Higher Geometry; we have nobody left here now to conduct research in the Higher Geometry, and we must look for such a man." Or they will come and say, "We are very well provided in the philosophy of Mathematics, in the Higher Geometry, in the Higher Algebra, but what we want now is a fire-rate man for teaching the calculus to engineers." And we all try to find such a man.

4684. Would they sometimes say "We want a man who knows the elementary students' side of things"?

*Ans.*—Yes.

4685. So that kind of man is put straight on it?

*Ans.*—Yes. So, through these departmental organisations, which are more or less informal and advisory to the president and trustees, and which with us are rapidly growing in influence, we seek the man in the given field of work, like Mathematics, that we want. Each member of the Department gets a sympathetic interest in the whole field through his personal association with colleagues working in other parts of the subject. They are very much given, with us at Columbia, to holding these departmental meetings in the evening. To make them quite informal they turn them into smokers, and they have perhaps a short paper read, an informal discussion, or a little informal supper. In general they try to promote *Gemüthlichkeit* of an academic and a departmental kind. That is extremely valuable and it helps many a man, who is doing this more elementary work, to feel that after all he is the immediate colleague and associate and academic equal of this man who has just written a great book on the Philosophy of Mathematics, and that his own scholarship and teaching skill are recognised and honoured.

4686. A member of the corporate body. What I want to elicit from you, if I can, and what I believe to be the case, is that the departments

are gradually getting a great accession of strength as compared with the Faculties as such, and when it is said that the Faculties run the thing, so to say, beneath the body of trustees, one has to qualify it largely, surely, by saying that the departments have a big say. We want to get here very much on our problem just the relation of that increased departmental power to the Faculties, because we do not quite know where to locate the discrimination of those who shall and those who shall not be members of Faculties?

*Ans.*—May I explain that; that is something we have gone through in the last 20 years with a good deal of detail. It has been my fortune to live through the period of reorganisation and reconstruction of our University and to take some part in it for 25 years. When we were reorganising and reconstructing, the Faculties, as such, had a good deal of business at every session. They were framing new conceptions, so to speak, of their work, new regulations for its guidance, new conceptions of their interdependences with other parts of the institution, and we had long and animated and interesting meetings. After that was all done and the framework was made and had operated successfully for a period of years, and had been amended where it seemed to need amendment, then Faculties, as such, found themselves left only with more or less routine work to do, such as passing on, sometimes very formally and in a routine way, the recommendations of departments. Each Faculty now has a standing committee on instruction, which is a sort of executive committee, and a department which brings forward any new proposal affecting a given Faculty takes it first to that Faculty's committee on instruction to thresh it out with that committee, and then it goes to the Faculty as a whole; but a department is very rarely over-ruled by the Faculty. Occasionally, if the Faculty as a whole think that a little too much time is being given in a prescribed curriculum to this subject or that, they may resist the attempt of the department to change it; but my experience, during the last 10 years, is that instances of that are decreasing. Our government at Columbia is practically by unanimous consent; we rarely have a roll call, we rarely have a division in any body from the trustees down. Nothing is likely to be done, in any Board or Faculty, that any considerable body of opinion seriously objects to, no matter how great the majority in its favour.

4687. That is a testimony anyhow. You rather indicated that the membership of the departments, which we now see is a very important matter, is virtually in the hands of the President on the advice, the unorganised advice, of the departments themselves?

*Ans.*—The President's power is just what his personality and knowledge can make it. If he can support his views by convincing reasons, he can get them accepted, alike by departments, Faculties, and trustees.

4688. It is not set out, who shall decide the membership of the departments?

*Ans.*—No; but in practice it is done by the trustees, on recommendation of the President, who in turn acts on the advice of the department concerned.

4689. But is it not set out anywhere who shall be and who shall not be a member of a department?

*Ans.*—Well, with us—it is not set out anywhere—it is matter of practice; it is done in the resolution of appointment by the trustees.

4690. It is not set out?

*Ans.*—No.

4691. The department, as such, is not a recognised entity or organisation of the University?

*Ans.*—It is recognised in our statutes. The members of a given department, say Mathematics, are those officers of the University engaged in giving instruction in that subject, and when John Smith is appointed professor, his resolution of appointment recites that John Smith is hereby appointed professor of so-and-so, at such a salary, and for such a time, and he is assigned a seat in such a Faculty, and becomes a member of the appropriate department.

4692. The trustees assign them?

*Ans.*—In the resolution of appointment.

4693. I was going to ask next, what about membership of Faculties?

*Ans.*—With us, every professor, associate professor, and assistant professor, that is all the men on permanent tenure and not subject to annual reappointment, are members of at least some one Faculty.

4694. It is not an honour to aspire to?

*Ans.*—No, it is an *ex-officio* relationship. My impression is—perhaps you do not care for opinions as distinguished from facts—that our Faculties are growing too large at Columbia for efficiency, and that a great many men are more or less bored by attendance upon their meetings; and I have often thought it might be wise to constitute Boards of Studies out of the Faculties, and make membership on such Boards an honour, and appoint different men for a short term of years so that all in turn would get some knowledge of the Board's business. But, for instance, our Faculty of Philosophy consists of 45 or 48 men, and if the question brought up is the substitution of one course for another in Assyriology, you cannot expect the teachers of romance languages and literatures and romance Philology, and those of the history of Philosophy and Psychology and Anthropology, to do more than vote aye, or take a very mechanical interest in the proceedings. Where it is possible—if it could be done without in any way derogating from the dignity and authority of the teaching office, which I should not be willing to assist in doing on any account—I think it might promote efficiency to substitute for a large Faculty a smaller body by designation to serve for a specified term. That is matter of opinion.

4695. Is membership of a Faculty restricted to professors or are other teachers allowed?

*Ans.*—To professors, associate professors, and assistant professors, and any Faculty has the right to invite junior officers of instruction, instructors and assistants, to sit with them without a vote, if they so desire. Some Faculties have done that. I consider it very advisable that they should, because it educates the younger officers, gives them an insight

into Faculty business; it makes them feel more like members of the teaching profession and less like employés.

4696. Are the budgets or estimates which are to be forwarded, presented by the departments or by the Faculties?

*Ans.*—By the departments through the President, with his recommendations as to each item, to the committee on education of the trustees, which sits for two, and sometimes three Saturdays in December, from nine in the morning until five in the afternoon, to go over the estimates. The requests of each department are presented in its own language. This committee reports in print to the trustees on the first Monday in January. That report goes, under the rules, to the committee on finance, and is examined by that committee, not from the standpoint of the items, but from the standpoint of the capacity of the corporation to meet the total which it is proposed to spend. The committee on finance report back the budget with their recommendations on the first Monday in February. It lies on the table, and is a special order for consideration and final disposition on the first Monday in March. The reason for that arrangement of time is, first, to get full and careful consideration of every item; second, inasmuch as the academic and fiscal year ends on the 30th June, and as the announcements for the next year must appear in the month of April or May for the benefit of students, departments want to know by the 1st of March what new positions, if any, are to be established, in order that they may seek the proper men for appointment and arrange their courses and get everything settled.

4697. To go back to the estimates, that looks as if the departments had more say in suggesting what departments require financial aid than the Faculties have?

*Ans.*—I have never known a Faculty to take action in such a matter, and I think no Faculty has any statutory power to make any suggestion of a financial kind.

4698. So that the departments seem really to have a great deal more power than the Faculties?

*Ans.*—No, the powers of the Faculties are very large in respect to the matters confided to them by the Statutes of the University. Departments have no powers save in relation to themselves and their own members. Even then they can only recommend. There may be a difference on that particular point between ourselves and some of the Western tax-supported institutions. I do not think it goes beyond the form, however, if there is a difference.

4699. Would it be true to say that a Faculty does have the real right to decide what course a student shall go through to take his degree in Law?

*Ans.*—Yes; subject to the approval of the trustees.

4700. And the departments only try their best to modify it, but they have not the last word?

*Ans.*—Yes; and they have the initiative in practice in suggesting the men who shall be appointed to carry it out, because when we have a new appointment to make, what happens is that the President and the remaining members of that department and a few other officers of the

University, who have some special knowledge of the subject, act practically as an informal committee on that vacancy. They consider the situation in all its bearings, go into the qualifications of all possible men at home and abroad, and try to agree upon the best man to present to the committee on education of the trustees, or the best two or three names.

4701. You have not the difficulty we have, which is really due to our having separate institutions within the University which are likely to war against one another?

*Ans.*—No; our Teachers College and Barnard College, the College for Women, are separate financial corporations, but they are incorporated in the University in a way that makes them an integral part of its educational system, so that teachers and students, unless they read the legal agreement, have no knowledge of any difference; they are different simply in the source of their financial support. They are all loyally devoted to the common university interest.

4702. (*Mr. M'Cormick.*) You spoke, President, of the undergraduate Faculty of Columbia College; that you would hold was not, to be quite accurate, a Faculty of the University as such?

*Ans.*—Yes, I should hold it to be not a Faculty of the University as such in one use of the word University. We are very much troubled in America on that point. The word University is much abused with us—well, I will put it in the baldest way—I think it is possible in many States for any three gentlemen to incorporate as a University, under the General Companies Act, and, of course, some have done so. We have to depend upon public opinion and upon publicity and upon reputation to distinguish the good from the bad. That is being done very rapidly of late. There are Universities so called, that are merely Colleges, but University in the technical sense means with us the correlative of the German University—advanced research and professional work—but we found it very difficult to find a word for the College in the University, unless we called it part of the University, so that what we practically come down to is to speak of University Colleges and separate Colleges. A University College is a College like Columbia College, which is embedded in a University; a separate College is a College like Amherst College or Williams College in a small town apart. That is a mere convention of our own, and has no legal weight, and, unless it were understood by educational students and experts, it would have no meaning.

4703. Now there is one question I would like to ask—I do not know whether you will be able to answer it—but it is one that we are constantly coming to, and that is the correlation of secondary education and University education. Now, in America you adopt a system, which neither Germany nor Britain has, of this College as a sort of three years' ligature between the School and University. Now, from what you have seen in Britain and Germany, how far does the College with you represent secondary education with us, and how far University education with us?

*Ans.*—On account of the conditions in Great Britain being less formal and in a more fluid state than they are in Germany, I find it more easy

to make that comparison in German terms than in British terms. Our American College in German terms, almost exactly covers the *ober prima* and *unter prima* of the Gymnasium and the first two years of University residence, or the first year of University residence if it is a three years' course; the College almost exactly covers that period of development and type of instruction. I do not mean with reference to the advancement of the student and his contact with knowledge, because that depends on the individual more or less, but in general scope. We have in America a three-fold system of organisation, while in Germany and to some extent in Great Britain you have a two-fold system. We have Secondary School, College, University; you have School and University. I should hesitate to say that any scheme or system which had grown up under one national environment and under national and temperamental conditions was susceptible of being transplanted to another country, or made its model. I do think, however, that our three-fold system is very wise for our conditions, in that it gives an elasticity to the scheme which is highly advisable, and it has this feature also. Universities must always be relatively few in number and far apart, they are becoming increasingly expensive to maintain, and hereafter in America they will be established very rarely; the funds needed are so stupendous in amount. Therefore, if you have this College, which is much less expensive and can be made very useful for from 100 to 300 or 400 students, it is susceptible of being multiplied at very many centres; and so over a great territory like ours it is made possible to carry the student somewhat farther in his educational career than would be the case if he were shut up to the Secondary School, of which, however, we have now more than 8,000; we have nearly 10,000, I should say. They have grown with amazing rapidity during the last quarter of a century. The college is the place where the ideal of general and broad culture is preserved, over against the intense specialisation of the professional and research students.

4704. (*Lord Milner.*) These College courses cover about the same field as your undergraduate Faculty?—That is its field?

*Ans.*—Precisely the same ground.

4705. (*Mrs. Creighton.*) And does it end in a degree?

*Ans.*—The Baccalaureate degree.

4706. (*Sir Robert Morant.*) Seventeen or 19 about; the rough age?

*Ans.*—The average age of entrance now is about 17¼, and about as many above the average drop out during the course as those below the average. The average age at graduation, therefore, is about 21¼, if the course is four years in length. You will see the statistics every year in our annual reports for each University.

4707. (*Mr. Currie.*) Has everybody who goes to the University been to one of these Colleges?

*Ans.*—Not by any means. In the Western States particularly the conditions of admission in many of the Universities to the professional schools have been the same or even lower than the conditions of admission to the Colleges. That condition is now being rapidly corrected under the pressure of public opinion, and the attempt is being made

throughout the better institutions everywhere to put admission to the professional schools, with the possible exception of the School of Applied Science, upon the basis of at least two years' attendance at an undergraduate College.

4708. (*Mr. M'Cormick.*) But I understand there is also financial persuasion from Dr. Pritchett in his report as to the raising of the standard?

*Ans.*—Yes, in this sense, that the Carnegie Foundation has defined a College. It had to. The terms of the trust were that it might grant retiring allowances to professors in Universities and Colleges and Technical Schools in the United States, Canada, and Newfoundland. Then the question arose, "What is a College?" That has never had legal definition in the United States by a court. The only definition that existed was one in the statutes of the State of New York, which was put there a few years ago and was copied substantially verbatim by the Carnegie Foundation. That prescribed that for admission to College there must be the completion of a standard four year Secondary School course of study.

4709. Fourteen "units"?

*Ans.*—Fourteen "units." Now the effect of that is not necessarily to affect the standard of an institution, but to affect it only if it desires its professors to participate in the retiring allowance of the Carnegie Foundation. Of course, as the retiring allowance system becomes known and spreads, the better professors are naturally going to gravitate to the institutions where they enjoy that advantage, and they are not going to accept a call from one where they enjoy it to one where they will not, so in that sense it is persuasion.

4710. A financial persuasion?

*Ans.*—A financial persuasion.

4711. I have only one more question. You spoke of the supreme authority not having any representatives on the teaching body within it. In that respect it differs from, I think, most of the supreme authorities in our Universities. Do you find that there is any complaint from the teachers' point of view as to their want of representation on that body?

*Ans.*—As a rule, none. There are a few men in America quite strenuous in believing that there ought to be no trustees, and that particularly there ought to be no presidents, but that is rather a small and ineffective school of thought. Its opinions take no account of the real facts in the history of our higher education. I have been interested to find that opinion both in Germany and in this country, where neither of these types of official has existed precisely as with us, is moving toward their establishment. Certainly, the history of higher education in America proves conclusively that it is trustees and presidents who have made our College and University development possible. They have provided the leadership and the initiative.

4712. Then, lastly, as to the Faculties, I can quite understand the departments of Faculties managing their own business, but there are questions—what I may call inter-Faculty or academic questions—affecting the status of the whole University, its academic status, where one

Faculty might disturb the balance. I understand that in the American University, you depend entirely for the preservation of the academic name of the University on the body of trustees; you have no purely academic body composed of representatives of the teachers from various Faculties?

*Ans.*—That varies in different institutions. We have such a body at Columbia and a very important one, known as our University Council, which consists of the President, the Deans, and two elected members from and by each Faculty. The tendenccy of that body is to become a Senate or Upper House, to the 10 or 11 Houses of Representatives or Houses of Commons which the Faculties constitute. Any educational matter which affects the University as a whole, or which affects more than one Faculty, originating in any Faculty, must go to the Council for at least an expression of opinion before it goes up to the trustees. The Council itself takes the initiative in all matters affecting the University as a whole, about which the Academic Body wish to take action. The Council is a very important body meeting four times annually, having its own committees, and increasing in importance year by year.

4713. You consider its work to be of great value?

*Ans.*—Of the highest value. What appears to me to be going on with us, although perhaps others would not agree with this diagnosis, is the attrition of the Faculties between the Council above and the departments below, and I should not be at all surprised if 25 years from now, or probably in less time, the Faculties, which are really a survival from the Middle Ages, should practically disappear. Then we shall only have the Council and the departments, with something else that might grow up, which we do not now foresee. I see the business going into these forms, not because anyone desires it to do so, not because it is the policy of any official or any board, but because it is the law of academic gravitation.

4714. (*Sir Robert Morant.*) Due to the numerous options allowed?

*Ans.*—To the numerous options allowed and the very great freedom allowed to the teaching staff, and their encouragement of freedom on the part of the students. We lay the greatest possible stress—and I think it of the highest importance to us—upon holding the teaching body responsible for their own work, and of course we have no external examinations of any kind from any source.

4715. (*Mr. Currie.*) Do you have anybody to decide in the case of two Faculties that have something in common, like Science and Medicine? Is there any body that brings them together in any way—subjects that are taught in both Faculties?

*Ans.*—The University Council would have jurisdiction if it were a matter affecting both Faculties.

4716. (*Lord Milner.*) The trustees?

*Ans.*—The University Council, which is a body of deans and elected representatives, together with the president.

4717. (*Mrs. Creighton.*) But I gathered that you said the departments collected teachers of a subject who were not necessarily all of the same Faculty?

*Ans.*—A department may have members in five or even six faculties.

4718. Dr. M'Cormick spoke of the departments and the Faculties?

*Ans.*—The way that operates is this. A department may be exactly as the Commission sitting about this table, and there may be two of those members who sit in the Faculty of Applied Science, and only two. If the department had any views on any detail of their subject within the jurisdiction of the Faculty of Applied Science, those two would be the men to represent those views in their Faculty.

4719. (*Sir Robert Morant.*) Just a word on the "no examinations," as I want to get it very much clearer?

*Ans.*—I meant by that External examinations.

4720. We want to get that clear on the notes. A degree is given upon what criteria and by whom?

*Ans.*—The Faculty recommending for the degree prescribes the attainments, that is the studies to be pursued and the degree of excellence—what we may call the passing mark or whatever it may be—and the department through its individual teachers returns A, B, C, and D, as having satisfied the conditions prescribed.

4721. How do you meet the accusation that everybody is branding his own herrings?

*Ans.*—We do not regard it as an accusation, but as a compliment.

4722. You would only say the herrings have a good market value when the brand is well known?

*Ans.*—That is it; it puts the brander on his mettle as a scientist and an educator. We hold that it is far better to subordinate examinations to teaching than to subordinate teaching to examinations.

4723. You never need to associate an External Examiner, as he is called, with the Internal Examiner?

*Ans.*—I think it would cause an academic riot!

4724. (*Chairman.*) There is just one thing I would like to ask you. How many students have you?

*Ans.*—Nearly 7,000 at present, I think.

4725. Is that a very large number?

*Ans.*—That is the largest number now in any one University. I have had a cable to-day saying that the registration yesterday at the summer session of the University was 2,550.

4726. (*Sir Robert Morant.*) Including any evening only, or no evening only?

*Ans.*—No "evening only" whatever.

4727. (*Chairman.*) We are very much indebted to you.

*Ans.*—I am very much obliged to the Commission for the opportunity to appear before them.

The witness withdrew.

## II

# AN AMERICAN TEACHER'S YEAR IN A PRUSSIAN GYMNASIUM

### INTRODUCTION

For three years past an exchange of secondary school teachers has been carried on between Prussia and the United States. Each autumn ten or twelve Prussian teachers come to secondary schools or colleges in the United States and a similar number of American secondary teachers go to *Gymnasien* in Prussia. The arrangement for the assignment of American teachers to the German schools is in the hands of the Prussian Minister of Instruction. The details for selection of American teachers and for the assignment of Prussian teachers are in the hands of the President of the Carnegie Foundation.

Secondary schools and secondary school teachers in the United States have not appreciated at its full value the opportunity thus offered to an American teacher or to an American school. It is not easy for a foreign teacher to obtain a nearby view of the Prussian *Gymnasium*. To become, therefore, a member of the teaching staff, to be taken into the entire official and social life of the school is therefore an experience which can not fail to be of the greatest value to the ambitious teacher. Such a teacher returns to his home with new enthusiasm and greatly increased capacity for usefulness. There is, therefore, every reason why the boards of control and the principals of high schools should make a generous provision in the case of any teacher who has the ambition and the capacity to undertake such a year's work. Similarly a school seeking to freshen its own methods of teaching will find advantages in welcoming to its corps of teachers for a year a teacher trained in the Prussian school methods.

The following report or paper by one of the exchange teachers is published not only because it gives an admirable picture of the work of the *Gymnasium* and its contrast with our own high school and college, but also because the paper makes clear the nature of the experience which the American exchange teacher may expect in Prussia.

The choice of American exchange teachers is made not later than June of each year. It is very much to be desired that teachers who wish to be considered for these places communicate with the President of the Foundation at as early a date as possible and that schools or colleges desiring a Prussian teacher for the year or the half-year beginning in the autumn make known their wishes also as promptly as possible. Particulars concerning the exchange are given in a pamphlet which may be had upon application to the Foundation.

HENRY S. PRITCHETT

*To the President of the Carnegie Foundation,*
*New York City.*

DEAR SIR: As exchange teacher assigned by the Carnegie Foundation to the Prussian Ministry of Instruction for appointment during the year 1909-1910, I have the honor to make the following report:

I was appointed in August, 1909, to the *Hohenzollernschule* in Schöneberg at Berlin in the *Oberrealschule Abteilung,* and was engaged there during the winter semester, October, 1909, to March, 1910, inclusive. Inasmuch as many married men might easily be deterred from going to Prussia thru ignorance of the conditions of life there prevailing and fear of the expense, it may not be out of place to state briefly my experience in point of living expenses. We secured an apartment consisting of three furnished rooms, kitchen and bath, for which we paid $29 per month, including steam heat, hot water, gas light, and service. This was in an excellent and convenient part of the city and proved in every way satisfactory. Prices for food we found on a decidedly lower scale than in the average New England city. At present each

teacher is required to pay an income tax to both kingdom and city, not only on his salary earned in Germany but on whatever he receives from home as well. One of my American colleagues was assessed at nearly $50. Current insurance premiums, savings bank deposits and a few minor items may be deducted in settling this tax; but it is, in my opinion, an injustice, and should be remitted in view of the small salary paid.

I. The work required of me at the *Hohenzollernschule* consisted in the instruction of twelve groups of boys averaging from eight to ten each, in the hours from 4 to 6:30 P. M. on four days per week. The work was offered as an elective. I had therefore only the most capable and ambitious boys from well-graded classes with whom to work. In groups of this sort the instruction easily became informal and conversational, the question of discipline dropt entirely out of sight, and to me personally the hours so spent were as delightful as any I have ever spent in the classroom. The method chiefly employed was the repetition of short, easy, and interesting stories or anecdotes on various subjects, often about America, followed by reproduction on the part of the pupils. Description of pictures, accounts of personal experiences, even somewhat lengthy speeches in the form of "prepared improvisations" played an important part. The nature of the work admits of great variety and the scholars themselves are not slow to make suggestions. Aside from my class work I spoke occasionally in the regular sessions of the English department, read to the students parts of classics they had studied, and gave one formal lecture on American school life before all the students of English. In some schools the work of the exchange teacher is fitted into the class work of the school. Comparing the two methods, however, it seems clear to me that the one allowing greater independence together with entire cooperation is preferable. It reduces the possibility of friction and keeps the foreigner on sure ground.

The results of the instruction were apparent. The pupils taking the extra work showed a steady improvement in their use of the language, and their teachers were unanimously in

favor of the arrangement. This experience tallies with that in other German schools and I wish to emphasize it, hoping that the plan may find a rapid and wide application in American schools.

The advantages of the exchange arrangement for the teacher I found to be in every way as great or greater than I had anticipated. Altho the attitude of some of the *Gymnasium* teachers was at first neutral or critical toward the unknown quantity which a foreigner presents, I saw this give way in every case with care and patience to a sincere, and, to me, exceedingly helpful friendship. I was most cordially received, entertained, and counselled, and was given every opportunity for observation and study. Most of those I met seemed certain that a "big book" was being written and wisht to make its verdict as favorable as possible. I attended classes in any subject at will and was even invited to take part in class discussions. The director welcomed me to the teachers' monthly conference, a gathering in which each man is pledged to secrecy and where the subjects discust and manner of treatment are such as to make an incorrect judgment on the part of an outsider extremely easy. My position was in general that of a permanent guest of the school. This opportunity of getting at one of the important and characteristic institutions of Germany from within, of feeling the real pulse of teachers and pupils in prolonged daily contact, and of becoming intimate in the professional and family life of one of the influential classes of German society, has been to me of inestimable value.

This spirit of cordial serviceableness was not confined to the school; it was equally characteristic of the Ministry in all the dealings which I had with it. Wishing to see something of other institutions, I applied for permission and received a general permit for all the elementary and secondary schools of Prussia. An application to the *Handels-Ministerium* secured the same privilege for *Fach-* and *Fortbildungsschulen* in Berlin. In this way I was enabled to study with more or less thoroness ten *Gymnasien* or *Oberrealschulen,* three *Fortbildungsschulen,* two *Fachschulen,* and three *Volksschulen*

from which the general impressions given below are drawn. This observation of several schools was, as I speedily found, however, an undertaking of doubtful worth, except as it served to impress me with one fact—namely, the thorogoing evenness and excellence of quality both of matter and of method in all Prussian schools of a given type. Making due allowance for difference in personality of instructors and atmosphere of local conditions, this fact is striking.

In respect to the demands made upon the incumbent of one of these positions and the qualifications which it is desirable that he should possess, I wish to endorse heartily the suggestions of Dr. Brown quoted in the Fourth Annual Report of the Carnegie Foundation. Especially should the knowledge of German be emphasized. Not that the man must be able to speak fluently, but he should read the written language as readily as English, including the German script. With such a foundation to build on he will find a speaking knowledge easy to acquire.

II. The Prussian school buildings which I saw were generally of a heavier construction than ours, as nearly as possible of fire-proof material, with interior woodwork reduced to a minimum. The older buildings have dark, bare, and unheated corridors, often with cloister motives in architecture. In these the *Garderobe* is not infrequently in the classroom. The newer structures are much better—bright and cheerful, with steam or hot water heating thruout. The typical variation from American schools consists in *Aula* and *Turnhalle*. The former is not usually, as with us, merely a big room; but it is architecturally distinguished and often inspiring. The *Hohenzollernschule* has a magnificent room with barrel-vaulted ceiling, rose windows in stained glass, and some fair mural paintings from German history; there is a sense of largeness and quiet strength about it which is very impressive. The *Turnhalle* is an indispensable adjunct of every Prussian school which I visited. It is detached from the main buildings and consists simply of a good high room with the necessary apparatus. In no case did I find any bathing facilities. Lockers and dressing rooms are also lacking, each boy simply hanging his coat

on the nearest projection and going to work. Each school has likewise a *Hof* of considerable dimensions of which vigorous use is made at the recesses. The classrooms are located, on principle, on the north side of the building to avoid the summer heat. They accommodate normally and for lower forms, about fifty boys on benches built for two boys each. Occasionally the size of the benches varies somewhat in a given room, but nowhere were there adjustable seats or desks in our sense, and the misfits were frequent and painful. Individual desks are the less necessary, however, as the German schoolboy carries all of his property with him each day to and from school in a large leather case, or *Mappe*. Provisions for automatic ventilation are found in the newer buildings, but even here the chief reliance is upon the throwing of windows wide open at the end of the hour while the pupils are out of the room. Floors are oiled frequently; blackboards are washt with a sponge instead of being dusted with a dry eraser. A commodious teachers' room supplied with tables, lockers, reference books, and periodicals is a customary feature.

Outside of school hours the building finds a greater use on the part of the public than is the case with us. The *Aula* particularly is used by the city when necessary for lecture or concert courses, celebrations, and as exhibition room. Some buildings are rented at free hours to private societies.

The equipment of the schools is fairly uniform. The adornment of the room is, in general, slight. There is an occasional handsome bust in the *Aula,* a group of statuary in the corridor, a simple picture or two, usually of royalty, in the classrooms, but systematic decoration is avoided. The natural science equipment is generally extensive and modern, tho not sufficient for individual experiment except in chemistry. Stereopticons are frequent and I saw one epidiascope. In maps, plans, and illustrations for class use, the schools are rich. These are stored in a special room whence they are brought for the particular occasion. Library facilities are, according to our ideas, almost invariably poor. There are usually two collections, one of texts, pedagogical and pro-

fessional material for the teachers, and one of general works of literature intended for the pupils. The latter is small, uninviting, and wholly dissevered from school work. The boys must, however, use that or none at all, as they are prohibited by the school from using city libraries. The use of reference works in the course of study scarcely exists, and "outside reading" plays no such part as with us. The restriction of promiscuous reading has probably some good effect here in forming literary taste. The boys showed on the whole a more genuine interest in classic authors and spoke with a greater feeling of appreciation and pride of their literary acquisitions on Christmas and birthdays than would be expected of the American schoolboy. The "*Zeichensaal*" and "*Gesangsaal*" are as indispensable and necessary a feature of every German school as the *Turnhalle,* and the former is always well fitted with lighting apparatus, drawing tables, models, copies, etc., of the most modern character.

The teaching force is, of course, the core of the German school system, and in its peculiar character, training, and organization lies the whole secret of the excellence of German education. The walls are bare, the benches are old and hard, the environment in general seems uninspiring, but there day after day without the counter-focus of an attractive textbook or a sympathetic parental refuge, sits the young intellect and heart of Germany face to face with a socializing personality as resourceful, well-aimed, and relentless as any in the world. The Prussian *Oberlehrer* is more thoroly socialized than any other element in the system except the soldier. He himself is chiefly a product of this unbroken, twelve-year-long process, a process which does not eliminate the individuality necessarily, but which lays it bare to the root, then if anything of it survives, gives it an outer shape at least of rigid conformity. In the *Gymnasium* the future teacher definitely receives his psychical fitting into the national consciousness, his moral direction and his method. Then follows a period of at least six and usually eight or ten semesters of unrestrained absorption and self-discovery at the university where what individuality he has comes to its own. Here he goes deep,

and masters the two or three branches which are to engage him for life. The state examination furnishes the necessary spur and framework for this activity and concludes his scientific preparation. The state then places him, grouped with a few others, in a *Gymnasium* or *Oberrealschule,* an institution precisely like that out of which he came and a teacher in which he will later become. Here he makes a systematic study of the theory and practise of teaching, analyzing minutely the psychology of the process on which he was himself brought up. He attends recitations conducted by the masters of the school and criticizes them from every point of view in his Seminar which is under the leadership either of the director of the institution or of a senior master of large experience. He conducts trial recitations himself in the presence of the director and other candidates, and is himself pitilessly criticized on all points of form and content. In this way each crumb of pedagogical experience and tradition which the past has hoarded, is delivered and digested, and personal variations are either ironed out altogether or stand a fiery test. It is most remarkable to what uniformity this leads. It appears not only in the higher schools, but is characteristic also of the *Volks-* and *Fortbildungsschulen.* I listened to dozens of teachers with the same result—the method was always the same, even the manner, gestures, exclamations, styles of reproof came from one source. It takes an unusually powerful and assertive personality to break thru the crust of this training.

The last step in the *Oberlehrer's* preparation is the *Probejahr* in which, without pay, he undertakes the formal work of instruction for eight or ten hours per week. In case of need he may be given additional classes which bring him a small remuneration. He is under the personal oversight and direction of some departmental teacher who visits his classes, criticizes his work, and inspects his written corrections. The director of the institution is also required to visit him and criticize. At the close of the *Probejahr* the report of the Seminar director and that of the director of the *Probejahr* are considered by the Provincial Board, and if they are satis-

factory, the candidate takes the oath of office and is declared eligible to appointment, which follows according to the needs of the system at the time. Conditions have prevailed in Prussia where this interval was of several years' duration.

After he has past thru the successive stages of his preparation and has won his appointment, the *Oberlehrer's* position is enviable. His good social standing in the community is assured. He is a state official, is practically non-removable except for crime, has a certain and increasing income and titular dignity, receiving after a fixt number of years the title of " Professor," and finally is member of a *" Kollegium,"* where all enjoy equal rights and share directly in the administration of the school. The director is, of course, the head and outranks his colleagues, but only as a *primus inter pares* so far as internal affairs are concerned. His prerogative is carefully defined and not infrequently challenged in the teachers' conference, where, in fact, purely objective discussions hinging on this point seem to an outsider to be a lamentable waste of time and energy. Some schools are thoroly faction-ridden, a condition for which there seems to be no remedy. This ultra-democracy is a source of great pride to the Prussian teacher, who regards the more centralized system of school management in America much as the American is apt to regard the Prussian monarchy.

Such is the *Oberlehrer* as a product. His training insures first, mastery of the subjects to be taught to an extent so far indeed beyond the needs of the pupil as to occasion the weightiest criticism of the system. The standard set by the state examiners is extremely high. In preparation for the examination the candidates are likely to exhaust themselves in technical investigations. Their tastes are refined beyond the more general, primary features of the subject, and when they face a class, they are irrevocably beyond it in interest and perspective. This fact would of course never appear in an examination and can not be compensated in any " seminar " year. It shows itself on the part of the master in the attitude of mental discontent with his work, in the lack of sympathy between pupil and master, in the current feeling found among

close observers in both university and school that the *Oberlehrer* habitually overshoots his mark and is essentially inferior as a teacher to the *Volksschullehrer*. It appears in the dim consciousness which I often heard exprest, especially by the younger teachers, that somehow there is altogether too much brain and too little soul in the institution. In spite of this, the thoro mastery of the subject to be taught remains an incomparable advantage; it makes possible an ease and authority which is a powerful educative factor.

In the second place the teacher possesses a practical acquaintance with the methods most approved by years of teaching experience. He has known no other from his earliest schooling. He has analyzed and dissected their purpose and operation and is wellnigh bound to use them. As a result the pupil knows precisely what to expect; he makes no readjustments, is aware of no friction, but hour after hour, regardless of the number and minor peculiarities of his instructors, he takes from the same spoon the same measured dose assigned for that particular moment. Whatever the loss in freedom and variety, one can but admire, or at least wonder at, the success with which these so nearly personal factors have been transformed into a system acting with mechanical precision.

Certain features of the methods employed by the German *Oberlehrer* in the classroom are worthy of notice, differing as they do more or less from our practise. The fundamental conception of the teacher is that of one who inculcates a given body of knowledge in the mind of a preferably passive pupil. The ideal teacher is a master of his subject and an expert in its presentation; the ideal pupil is one who is completely receptive. The teacher imparts and drills; the pupil receives and repeats. With this in view nothing is omitted that will assist in focussing the attention directly on the teacher. "Textbooks" such as are used everywhere in America, with introduction, explanatory notes, tables, charts, diagrams, etc., do not exist. Textbooks in Germany are literally confined to the "text" or, in history, to the barest outline of the ground to be covered, while all supplementary material such as biographical and explanatory notes, sug-

gestions on hard places, the flesh and blood of historical narrative, etc., are provided by the teacher, who sets all forth in the best style at his command in the form of an uninterrupted lecture from which the pupils make what notes they wish. For all of this they are held directly responsible on the following day in an exhaustive oral examination which forms the counterpart to the lecture, the two exercises dividing the time about equally. Reference books are scarcely used at all, and I saw no sign of independent reading for subjects of class discussion. Voluntary questioning on the part of the pupil was in my experience wholly lacking. The whole spirit of the instruction is against it, and I think it would be regarded in most classes as irrelevant if not impertinent. The lower parts of the windows are frosted to prevent distraction; all books and pencils must be removed from sight during the hour; the hands of the pupils must be placed above the desk. Even the blackboard space is reduced to a single small square for the exhibition of one all-engaging operation.

In the daily oral test this strain of attention is particularly noticeable and is heightened by a peculiar procedure which very largely prevails. This consists in what might be termed a "dovetailed" monologue wherein the teacher furnishes the bulk of the narrative, pausing, however, at critical points to allow the pupil to fill in or continue. This is carried out rapidly and usually with great skill. It saves time and to follow it successfully requires absolute attention on the part of the pupil. Here, and in general where the pupil is involved, his part is voluntary—that is, he is not formally called upon. The class work is done by those who wish and are ready to answer and raise their hands. The burden of class opinion is heavy upon the laggards, so the general tone of the exercise is energetic and spontaneous. As a guard against confusion, the "psychological pause" after the question or after the break in the monologue always appears.

A course of twelve years in this sort of thing has obvious results which become still more intelligible if two additional facts be taken into account: first, that the German pupil attends school on six days in the week instead of five—an increase

per year of forty days, or two American school months; and second, that his program provides for no "study periods" during school hours, that is, with the exception of an occasional written exercise, his entire school day is strung to a continual tension of give-and-take with a master. Pupils develop a power of accurate aural attention far superior to that of American schoolboys. With no recourse to textbooks which "have it all in" and without the slightest inducement to "cramming," the German boy has every incentive to fix the thing on the spot, whether interesting or not. German works on pedagogy emphasize and German teachers practise the rare art of reviewing to a phenomenal extent. Every oral test embodies not only the matter in hand but copious references to all the preceding instruction and to related matter in other fields. An important fact will come to the surface in a dozen different relations at unexpected times. It pays therefore to know it. The effect of this in getting a real conviction of a truth into a boy's mind, instead of a mere book association, is gratifying. The teacher in turn becomes a master of precise and effective presentation—*"anschauliche Darstellung"*—the worthy and achieved motto of German instruction. He is a capital story teller with a strong sense for logical order and artistic completeness. His object is not to draw out or to explore the boy or take any part in his development other than to secure him a perfectly confident familiarity with a considerable body of definite information. He aims, therefore, in the second place, at being a clever examiner and a tireless drill master.

The above mentioned features are the more appropriate inasmuch as the German system keeps a boy "in solution," as it were, thruout his course, until the entire result is precipitated in the final examination. Monthly, quarterly, or yearly examinations, which with us in general settle a student's account to date, have no place in German schools. There the pupil is always responsible for everything that has gone before. Constant reworking of the field thru the various successive periods of the pupil's development becomes therefore a necessity.

The pupils in a Prussian *Gymnasium* produce a distinctly favorable impression. Two general reasons may be assigned. First, the boys are drawn from a generally high class of families—roughly those who can pay the $30 to $50 a year required for tuition. There are some exceptions to this in the form of free places, or scholarships, offered to exceptionally worthy boys. Secondly, the whole structure of German social conditions constitutes a pressure *into* the German *Gymnasium* instead of as with us a pressure *out* of the high school. Of immense importance here is the fact that a gymnasial education entitles the possessor to a military service of one year instead of two years—a matter of acute pride. Of equal importance, tho to fewer persons, is the fact that a gymnasial education is the only avenue to the university, to government positions, and to professional life. These conditions clarify a situation which in America is often difficult for the school; they furnish a direct and powerful incentive which operates vigorously on the pupil himself. His own and his family's pride are involved, and his entire future is staked upon his success in school. Tempting opportunities to go to work, to launch a business career, which with us weigh so easily against the slightest school friction or indisposition, are unknown to the German boy until after his goal is reached. Failure here is not merely failure, it is outer darkness. The weight of this fact is everywhere apparent. Discipline in the *Gymnasium* is no problem as with us. In general it is my impression that the German boy is less sensitive to straightforward appeal than the American, but when you threaten his standing in class or his presence in the school you touch a nerve which lies much nearer the quick of his existence than in the case of the young American. He is therefore an easier and more constant factor to handle. At the *Hohenzollernschule, "Nachbleiben"* or recall for an hour's special session once a week is a severe penalty and the masters are troubled if it involves so many as half a dozen out of a school of 600. The contrast of such a situation with that of a really good American private institution which I know, where a Saturday

morning "make up" session regularly recalls from one-third to one-half of the student body, is amusing.

This condition, however, tho an obvious advantage for the school and the teacher, and contributing to the dignity of education as such, is not an unmixt blessing for the pupil. Upon a sensitive nature the pressure of obligation is heavy, and this, coupled with the severe classroom methods in which no pains are spared to increase the tension and stimulate emulation, leads to many mental and not a few physical tragedies. During my stay in Berlin, where I followed the matter with some interest, there were repeated cases reported of suicide of secondary school pupils in various parts of Prussia. While the inquest would invariably, and probably with apparent justice, exonerate the schools from direct responsibility, the indirect connection seemed to be as an outside observer all too clear. At the end of the semester when promotions were announced, one of the leading Berlin papers felt it necessary in a conspicuous editorial to warn parents against making the disgrace of failure too keenly felt.

In mental alertness, in the power of initiative, and in real breadth of general interest, I have not found the German schoolboy such as some of my colleagues say they have found him. It is true that the methods of instruction used seem to tend to a rigorous formality of knowledge and a passivity of mind. It is true that the instructor and his utterance occupy the stage rather than the pupil, his points of view or personal inclinations. Nevertheless, among those boys whom I had to instruct and with whom I could become well acquainted, I found as keen an appetite for profitable side interests, such as aviation, boat building, chemical experiments, stamp collecting, and wireless telegraphy, as I ever found among American boys. And in these their long training in thoroness of method and precision in results, produced a perseverance and a maturity of investigation that would leave most of our American amateurs aghast. A certain useful versatility and disregard for established forms and standards, characteristic of the American, is certainly lacking in the German youth; but it should be noted

that there is also lacking a certain painful shallowness which too often accompanies it.

Physically, German youth in school, at least in the *Gymnasium,* impresses me as distinctly superior to the average in American high schools. This was hard for me to believe at first; but the physical conditions are certainly sounder, fresher, and more even than with us. One misses the contrast between the physically over-active one-third, and the languid, over-read, and over-fed two-thirds of our classrooms, and the reasons are not far to seek.

First, the tenser mental requirement reacts on the physical condition and keeps each boy alert and purposeful.

Second, physical exercise is required of every pupil two or three times per week in the *Turnhalle* at an hour when it will best relieve his pressure of program. So far as possible this takes place in the open air, even in the winter, and simple apparatus such as parallel and horizontal bars, long and short horse, tug of war, ropes, etc., is brought out into the school court for the purpose. One school has half of its court covered with six or eight inches of clear, white sand to serve as a mat, and then conducts practically all gymnastic exercises in the open air. Great pains are taken to keep this exercise varied and interesting. Games of all sorts, an apparently infinite variety of games of ball especially, are participated in by the entire class.

Third, a rational system of rests or *Pausen* is introduced providing from ten to twenty minutes of recreation after every period (45 minutes) of class work. During this interval all class work and study of any sort is prohibited, windows of the classroom are thrown wide open, and the pupils are required to spend the time in the open air outside the building. If it is actually raining or snowing they promenade in the corridors. One has but to see this system in operation to realize the barbarity of the continuous period plan which prevails so far as my observation goes in our American high schools. There, after the first two hours, the day drags wearily on to the close with the senses of both pupils and teachers dulled by the almost unbroken round. The German class,

on the contrary, tumbles into its seats in the nick of time, with hair rumpled perhaps, but with minds lively and hearts pumping fast after a race outside and up several flights of stairs. Your critic argues that too much disorder results from six repetitions in the course of the morning. But the master appears at the door and every boy is on his feet with face to the front in an attention which not even the rare visitor can divert until he gets the command "*Setzt euch.*" The silence is absolute and the sense of readiness is something unknown in American classrooms.

Many features which would probably come under the head of classroom practise have already been considered. Certain other points are worthy of mention. Each class is in charge of a class-teacher or "*Ordinarius*" who looks after the general interests of the section and conducts the interviews and correspondence with parents concerning the boys under his charge. He ordinarily instructs them in one or two subjects and endeavors to keep himself informed about their work with other masters, altho most of these, too, have regular office hours when they may be consulted by the parents.

An important factor in the work of Prussian schools is the class-book. It contains the names and records of the class, and lies open on the desk thruout the day. All marks of censure are here registered against the individual pupils for the information of the *Ordinarius*. In it are put down accurately memoranda showing exactly what the class does each day. These entries not only make a valuable means of control for the director and the whole body of teachers, but it is a documentary guide to the work accomplished or assigned. If the teacher is giving to the class too much or too little it will be shown. If a pupil has been absent several days, he can here ascertain exactly what ground the class has covered in his absence. The function filled by the class-book is a most important one for director, teacher, and pupils.

On the basis of the class record, the class is reseated several times in the course of the year, in order of rank—the ranking boy, called the "*Primus,*" receiving the corner seat in the back row. Certain minor duties fall to him such as reporting

the attendance and bringing the class to order before the master appears. He has charge of the class bookcase and is the recipient of various little honors which distinguish him considerably. The formal ranking of the class takes place at quarterly intervals and is a result of a conference of all the teachers instructing the class, with the director of the institution. There is an increasing tendency among the instructors to give large weight to a written exercise or test in determining the pupil's mark. Such results are very elastic, however, and a general sizing up of the pupil seems to be regarded as the fairest method of judgment. Excellence in one subject is regularly allowed to count, both here and in the final examination, as compensation for deficiency in another, except in certain fundamental studies. The marking is accomplished on the basis of a few broad groups such as "satisfactory," "good," "very good," etc., and much amusement is exprest over the English and American system of percentage in determining credit. The final or *"Abiturienten-Prüfung"* is the great event in the gymnasiast's career. It is serious and comprehensive, but owes much of its awe to its unique character. In the *Oberrealschule* the old Latin essay which constituted the supreme test, has given place, of course, to a German essay on which corresponding weight is laid. A preliminary written examination in each subject on questions prepared by the master in charge, and approved by the *Provinzial-Schulkollegium,* is followed after some weeks by the formal oral examination conducted likewise by the class teachers but under the immediate inspection and criticism of the *"Schulrat"* and in the presence of a representative of the city authorities and of the entire body of instructors. Excellence in the written tests may relieve a good student from this ordeal in which the formality of the occasion is certainly the most trying element to face. Frock coats and white gloves, a session opened with prayer and exhortation, an array of thirty or forty critical witnesses, all contribute to disconcert a usually steady and capable mind. A second or delinquent examination is not admissible. In case of failure the last year's or half-year's work must be repeated.

The subject-matter of the curriculum, its division and arrangement have already been presented in these reports, and I shall note simply certain features which appear to me worthy of emphasis. The very fact of a thoroly analyzed and clearly articulated body of knowledge such as that which the curriculum of the Prussian secondary schools presents is, in itself, impressive. It constitutes a standard measure of education which may reasonably be expected of a boy of eighteen years of age, and appeals to me strongly in contrast with the infinite variety and the inequality of curriculums and requirement which obtain in America. As applied to Prussian schools it fixes definitely the amount of ground to be covered and indicates the main lines of procedure. It leaves therewith, however, full liberty to the individual departments of a given school to organize the matter for its treatment in that school as they see fit, enlarging or reducing at this point, inverting the order at another, but in the main following the official prescription. This freedom within limits, which compares so favorably with the much more rigid French system, is what gives the German schools a large measure of inner spontaneity and elasticity. A master feels guided but not bound by the regulations as to matter and manner.

Admirable as this curriculum is in spirit and results, it leaves, I believe, much to be desired in view of the too narrow restrictions placed upon the pupil. A boy of nine entering a *Gymnasium* is pledged thereby to nine years of Latin and six years of Greek, together with the lamentable exclusions which that implies. If it be a *Realgymnasium,* it may offer nine years of Latin, seven years of French, and six years of English, or if it be an *Oberrealschule,* nine years of French, and six years of English, with the balance made up in mathematics and science. For boys of from sixteen to eighteen or nineteen years of age to be thus confined after their individual tastes and inclinations have plainly shown themselves is, in my opinion, a radical wrong. There is much discussion on this point among German educators and a tendency is manifest towards the appreciation of a degree of liberty in these upper forms, such as is allowed, for example, in the work

of the first two years in an American college—a period which roughly corresponds. Indeed, in the upper years of the course the elective principle has been adopted in several *Gymnasien* (*Monatschrift für höhere Schulen, V. I.*), but marked capacity and unusually effective work in a special subject are expected where election is permitted; there are no *soft* electives.

As is well known, the German secondary schools employ the so-called "natural" method of modern language instruction. The masters are usually trained abroad, and have thus a practical familiarity with the language which admits of its constant use in the classroom from the outset. Aids of every sort in making the language live, especially the present exchange-of-teachers plan, are warmly welcomed and utilized. The results are apparent in every intelligent German audience. Lieutenant Shackleton, lecturing in Berlin on his polar expedition, was much more generally understood on the second occasion when he spoke in English than on the first when using doubtful German. It is still a matter of frequent and vigorous discussion, however, whether the *Oberrealschule* with its basis of modern languages taught after this fashion is, after all, a reasonable substitute for the *Gymnasium* with its more pronounced analytical courses in Latin and Greek, and a feeling is exprest among some of the modern language teachers that a return to the old system, or a modification of it, may not be far distant. But the attitude of the Prussian Ministry of Instruction, exprest in its recent ordinances, indicates its complete acceptance of the natural method in modern language work.

The instruction in music and drawing hold a place in the German system which unfortunately has not yet been conceded them in equal measure in the average American schools. The Germans long ago outgrew the conception of these branches as "fads," if they ever possest it, and they have never entrusted their direction to superficially educated teachers or eccentrics. The instruction is serious and intensive to the last degree. In drawing, the acute observation and free reproduction of form, the developed sense of beauty and proportion

together with no slight initiation into the technique; in music an extraordinary refinement of ear, a knowledge of the fundamentals of harmony and, best of all, an effective discipline in musical taste and good judgment, are some of the results achieved. It is not too much to say that these interests bear fruit in an essential modification of the "*Weltanschauung*" of the German people. Fine arts and music are a national, social possession.

In the matter of manual training in higher schools, the Germans are little more than beginners. The undemocratic social prejudices are perhaps chiefly responsible for limiting the training of the future scholar and professional man wholly to his brain. In a few schools, however, there is now an opportunity for such work. It is wholly voluntary, to be sure, must be done out of school hours, and involves a special fee; but it constitutes nevertheless a concession, and its application will undoubtedly increase.

There remain to be noted some observations with regard to general school life and activities, which in American schools fill a large place in the student's program. At first sight this aspect of a German school seems to present a total blank. No "athletics," no literary or musical societies, no socials or student festivals, no school papers, no plays or dramatics of any sort, in short, no spontaneous school life whatever on the part of the pupils alone, and extremely little under the direction of the masters. Several conditions have contributed to this situation: the solemnly public and official character of the school as an institution of city or state, the paternal notion of the treatment of the young in general which refuses to foster or trust spontaneous expression on their part, and finally the almost entire absence of good boarding schools of a private nature, where, as in America, such activities could develop and serve as models for the public institutions. The only such features which I observed were the celebrations of the national and local festivals by more or less solemn gatherings in which the chief place was always given to a festival address of severely literary character by one of the masters, taken in order of seniority, while some of the best pupils figured as secondary

performers in declamations, scenes from classic plays, or in music. These latter productions were thoroly drilled by the masters and were splendidly given, revealing an abundance of talent. Moved by what he had heard of English debating societies, the director of the *Hohenzollernschule* determined to start such an interest among his boys, and the same is now, I believe, under way. Once during my connection with the school a game of *"Schlagball"* was arranged with a neighboring school. It was later canceled, however, and was never played. As a great innovation a few schools, mine included, were given shares in a boathouse on a nearby lake and a boat of their own for practise. At a number of schools, however, there is a marked movement in favor of rational sport, and the emperor strongly endorses the movement; but it is never allowed to usurp the main purpose of the school, being treated simply as a means of physical and social education.

These embrace all of the student activities of the winter, successful or abortive, so far as I remember. One can easily see why it is that masters in a German school can rejoice in a wellnigh absolute and unbroken attention to the work of the classroom. On the other hand, it is equally clear why what we know as school loyalty simply doesn't exist. It is a matter of keen regret on the part of many a warm-hearted director and master, but the fact remains that the German student in both university and school regards his Alma Mater with the total indifference and apathy which he naturally feels towards, perhaps, the postal system put at his disposal. This is varied only by the sense of freedom and relief with which he leaves the institution which in his mind stands for strain, struggle, and restriction, without the counterbalancing notions of opportunity and sympathetic inspiration. So far as I could learn, no school makes use or keeps track of its alumni. Individuals pass thru the books like raw material thru a factory. The *Hohenzollernschule* has indeed a recently organized society of *"Ehemalige Schüler"*; but its purpose, I am told, is purely social and apart from the school as such. Its main function seems to be to meet with the young *Abiturienten*

at their graduation *Kneipe* and congratulate them on their exit.

One minor feature of some schools, recently introduced, is, I believe, unknown to us and deserves comment—the school savings-bank. Started as a doubtful experiment in one of the *Volksschulen,* it has proved successful, and has spread widely both among the *Volksschulen* and into the *Gymnasium.* It is a simple and convenient arrangement conducted by the pupils themselves and supervised by a master. Thru this device there were found in a *Volksschule* in Schöneberg enough pupils in about three hundred to save $4,000 in four years, and this among the poorer classes. When I left the *Hohenzollern-schule* the system was on the point of being adopted there, and in several discussions I heard no serious criticism of its working in other schools.

III. To do justice to the *Volks-* and *Fortbildungsschule* would require a discussion which could hardly be brought within the limits of the present report. The former presents broadly many of the features described in the *Gymnasium*—the same well-trained, thoroly disciplined teaching force, inferior in personal caliber naturally, but pedagogically more skilful and successful than the *Oberlehrer.* The pupils average lower in ability, as there is no possibility of selection or exclusion other than that of refusing promotion. The general atmosphere is consequently duller and heavier than in the *Gymnasium.* The organization is thoro and efficient and the curriculum admirably planned. Were it not for the inevitable closure of opportunity which attends the *Volksschule* as compared with the *Gymnasium,* one could become enthusiastic over it and the powerful part it plays in German life.

The *Fortbildungsschule* in its present course of expansion and widened application in Prussia I regard as the most interesting and promising feature of German education at large, for it has been widely adopted outside of Prussia, in Munich the system of the *Fortbildungsschule* under Dr. Kerschensteiner being in advance of the Prussian system. The problem of securing for those who leave the *Volksschulen* at fourteen years of age, a uniform and adequate training for a trade or

for business life, together with a deepened sense of civic and national responsibility and a clearer moral purpose, has led to the recently inaugurated system of a three-year compulsory schooling for all apprentices and clerks. The city pays the bills and the employers stand the loss of four hours twice a week. The only serious objection has arisen in this latter quarter. In the majority of cases the pupils are glad to come, finding the school an agreeable change from the grind of the shop, and realizing clearly its ultimate value to themselves. The intention is to develop a corps of teachers who shall give their whole time to this work, then to entrust a class to the same teacher for its entire three years' course. The writer inspected closely classes in baking, blacksmithing, wood working, also for merchant apprentices in hardware stores, bookkeepers, etc., and can express only admiration for what he saw. The effect of such work in giving a broad grasp of a trade and dignifying it by setting it in its larger relations can not fail to be of lasting value. As Geheimrat Seyfeldt, the director of these schools in the *Handels-Ministerium* told me, " It is on the compulsory *Fortbildungsschule* that we have set our hopes for Germany's industrial future."

IV. Summing up the elements of strength and weakness in the Prussian system with a view to its bearing upon our own institutions, I would emphasize four points of advantage toward which at least our heterogeneous school systems should strive:

1. Adequate and uniform preparation of the teacher. Nothing would, I believe, so improve our conditions as this. Make his preparation purposeful instead of aimless, acknowledge and confirm his achievement by some competent and recognized authority and confine his instruction to those subjects which he is really prepared to teach. Instead of teachers by grace of a " general " college education, who dislike their work because they don't understand it and avoid their associates for fear of revealing their own incompetence, we could then hope for something of the German sureness of touch and the open fellowship of intellectual comrades. A few city school systems attain this by local examination systems. The desira-

ble goal is, however, a uniform standard established by some respected, unofficial body such as the Carnegie Foundation or possibly, the United States Commissioner of Education, a standard which would gradually attract the acceptance of leading cities. Germans admire and wonder at our College Entrance Examination Board because, tho unofficial, it has established standard examination requirements. The same result would be likely to follow if applied to the approval of teachers.

2. The introduction of a standard curriculum. In this we have made much greater progress than in any other of the three points mentioned, thru our efforts toward a common standard of college entrance requirements. Here again the resources and the prestige of the foremost educational body in the country are necessary. An organized body of material for instruction, worked out and continually revised by expert school men and backed by the approval of the National Education Association or either of the other agencies mentioned above would make its way rapidly upon the American principle of the contagion of simple excellence.

3. A standard classified pension system would, I believe, operate powerfully with the first point mentioned to raise the teacher to a position of effective influence and recognition. The German teaching profession contains the best mentality of the nation because it is dignified, secure, and relatively well-rewarded, and the conditions which contribute to that result must be duplicated in America if we would attract men at all commensurate with the importance of the work.

4. The development of the trade schools which we have and the introduction of technical industrial schools on a large scale to accomplish the ends aimed at by the *Pflichtfortbildungsschule* in Prussia. This is a movement which, of all our educational proposals, can command the heartiest and most immediate response from the general public. It is at the same time the surest path by which to encroach educationally upon the fifteenth, sixteenth, and seventeenth years of youth and eventually to win them for a wider and more thorogoing mental development.

The feature which I should characterize as the fundamental weakness of the Prussian school system is the striking cleavage between the higher schools and the *Volksschulen*. This appears to be as characteristic of the German's social instinct as it is repugnant to the Americans. It seems to the latter especially unworthy, as it is founded wholly upon a basis of wealth. The child who passes his tenth year in a *Volksschule* where tuition is free, instead of in a *Gymnasium* or *Realschule* where a tuition of from $30 to $50 is charged, finds himself, as a rule, permanently entered upon a career in which university attendance, preparation for a liberal profession, or qualification for any of the higher governmental positions are definitely prohibited. If after leaving the *Volksschule* he is ambitious for any of these, he must recover all the ancient or modern languages which he has omitted since his ninth year and pass a *Gymnasium* examination in which tradition presses heavily against him. This involves such concentration of effort that it is only the few gifted individuals who accomplish it, while for the mass the final parting of the ways comes at the ninth year, when the child is virtually helpless to choose. Even when his efforts are successful and the *Volksschul*-pupil possesses the longed-for *Gymnasium Reifezeugnis*, the loss of time which the process has made necessary constitutes a serious and permanent handicap. The great success of the *Reform Gymnasien* in Prussia within recent years is due, among other causes, to the opportunity they offer for the postponement of this decision to the completion of the twelfth year.

The system places an effectual intellectual muzzle on the brains of the lower and poorer classes. At the same time the admirable *Fortbildungsschule* diverts their energies into pursuits, profitable and proper to be sure, but as harmless as possible for the existing undemocratic order of society. This condition of things the leaders of German thought and society in general have admittedly no desire to change, tho there are not a few restless reformers fighting for the "*Einheits-System*" and pointing to America as a brilliant example of its just and successful operation. Attention should, however,

be called to the fact that the state devotes 10 per cent. of its entire school revenue to scholarships and that every tenth pupil has to pay no tuition at all. As a matter of fact, a great many pupils belong to the so-called lower walks of society and, if they have the necessary talents, succeed in entering the university and the professional schools.

One lesson to be drawn from the situation, so far as it applies to American conditions, is the desirability of maintaining a wholesome, democratic, educational structure. We ought always to keep clear the way in our institutions of higher learning for capable minds of every condition of life to rise from the bottom to the top. We never desire to see our universities develop a caste system. At the same time, one must not lose sight of the fact that the German system of schools, while steering the average boy into a skilled trade, nevertheless leaves the way open for the exceptional boy of the poorest class to enter the higher institutions. There are in the German system both a wealth of opportunity for industrial efficiency and a screening of the material admitted to the higher schools which are absent in our system of education.

Respectfully submitted,

WILLIAM S. LEARNED

LEIPZIG, SAXONY

## III

## A NEW COURSE OF STUDY IN YALE COLLEGE

When Yale joined the general movement of American colleges, away from the old required course and toward that condition which is described with a cheerful euphemism as the elective "system," she still clung to some of the traditions of her past. While it was conceded that the studies of the old course could no longer be allowed to exclude all other subjects from the field, there appeared, on the other hand, no reason for supposing that all the subjects, old and new, could safely be treated as like and equal, or that all the students were so unlike that they could not be guided by some general rules in the choice of their studies. Yale College, therefore, during the past decade, has sought to retain a considerable share of its old authority in directing the choice of studies by its students. The purpose of this paper is to describe the plan which has been followed to effect this end, and the considerations which have moved the faculty recently to adopt a new plan which draws still tighter the reins of authority.

It may not be amiss, at the outset, to distinguish two elements in the course of study which are often confused but which must be separately considered: one is the material of instruction, the actual courses offered; the other is the rules under which the student must or may pursue the various subjects to make an acceptable combination.

The danger, under the elective system, that the student will choose the wrong subject is so evident that it has somewhat obscured a parallel danger which may not be a necessary consequence of the theory of free election, but which in practise has generally accompanied the elective system, and is responsible for much of the criticism of the course of study in American colleges in recent years. This danger, namely, is that the instructor will teach the wrong subject, or—what

amounts to the same thing—a good subject in the wrong place. *Lehrfreiheit* may be distorted in the college, as well as *Lernfreiheit;* and if the faculty defers as readily to the personal inclination of the teacher as to that of the student, it magnifies many fold the chance that students may waste their time in the nooks and byways of the curriculum.

While the Yale faculty, in the expansion of the curriculum, agreed readily enough to the multiplication of subjects and courses in junior and senior years, it has always guarded pretty jealously the first two years. In recent years freshmen have had eight subjects and sophomores have had fifteen subjects, from which to choose the five courses making the normal work of a year. The choice has not been quite so simple as might appear from this statement, for in some subjects alternative courses have been offered; but in most cases the course which might be taken in any subject has been determined by the student's previous preparation, and for freshmen a further limitation was imposed by a rule that they must continue three of the subjects offered for admission to college.

Furthermore, regarding now the conditions limiting the freedom with which a student might combine the subjects offered to him, the faculty has sought by certain general rules to guard against the dangers to which the ignorant or careless student is exposed under a system of free election. During the past ten years the courses of the college have been arranged in three main divisions: (1) language, literature, and the arts; (2) mathematics and the physical and natural sciences; (3) philosophy, education, history, and the social sciences. Within the separate subjects (of which twenty-five have been distinguished), the courses have been graded according to their advancement. Courses of A grade are elementary in character; courses of B grade, intermediate; courses of C grade, more or less advanced; courses of D grade, distinctly advanced.[1]

[1] The system of grading has proved distinctly helpful in protecting the college course of study from the graduate courses which many professors are inclined to offer to undergraduates. Courses of D grade, i.e., graduate courses, may not be described in detail in the statement of the col-

The rules have required every student to complete in some one subject a major of twelve hours (or nine hours, in case no course in the subject is open to election in freshman year) of connected, graded work, including not more than one course of A grade, and at least two hours of work of C or D grade; and, in addition, three minors, each of five hours or more of connected, graded work, and aggregating at least eighteen hours, distributed in the three different divisions of the field of studies, and to be completed before the end of junior year.

Under the rules, therefore, about one-half of the student's total time has been subject to general regulation, while the remainder could be spent in any studies that he might choose.

The objects of this system of regulation are apparent; and the success of the system is indicated by the fact that it has been maintained in Yale College, with slight modification, since its adoption in 1901 to the present time, and has found acceptance, in varying forms, in a number of other American colleges.

While experience has proved that the system is good as far as it goes, the question has arisen at Yale whether it goes far enough; and a careful investigation and discussion of the subject have convinced the faculty that it may profitably be modified and extended.

Within the narrow confines of the eight subjects offered in freshman year it would seem safe to trust the free choice of a student. Even there, however, and even with the requirement that a freshman must continue three of his entrance subjects, the dangers of undirected choice have become apparent. Instructors who have had most to do with the freshmen at the time the choices are made are of the opinion that of the students entering college many do not know what they want to study, and many more, who think they do, find out later that they have misjudged their interests and capacities, and have started their academic career in the wrong direction.

lege courses; and the brief reference to them permitted in the college statement must be accompanied by the warning that they may be taken only with special permission.

No power on earth can lead a student to make just those choices which his future will justify, or can make his choices for him with infallible prescience. By the exercise of a slight restraint, however, the student can be prevented from committing himself too deeply, and can be trained for an advance along several different lines, with the assurance that the time spent will not have been wasted, when the student has found the one subject to which he will devote himself. Of the eight courses of freshman year, four cover foreign languages. Few will deny the value of training in language, particularly in the early years of the college course. Few will agree, on the other hand, that the average freshman, normally ignorant in such subjects as history and science, serves his own interests when he chooses for his first year four languages, with English, perhaps, for his fifth subject.

Again, in sophomore year, the present system has been unsatisfactory, not in that it has gone too far in restriction, but in that it has not gone far enough. There is general agreement that the provision for the distribution in different parts of the field of studies of the three minors has worked well. The danger that a student will waste his time in learning the elements of a representative branch of study, such as language, science, or the studies concerned directly with man himself, is so much less than the danger that he will waste his time by learning nothing about it, that the faculty believes itself justified in requiring every man to make an essay in the chief parts of the field.

But the privilege, under the present system, of leaving until junior year the completion of the minors has made it possible for sophomores as for freshmen to confine their interests too narrowly. The sophomore is, of course, better fitted than the freshman to choose a field of work to which he will devote especial attention, but he may easily carry his specialization too far. If he excludes entirely certain representative subjects, he may find too late that the neglected subject is one which appeals to his interest and capacity, and may reach this conclusion when the time has past in which he might most effectively prepare himself for its study. If, on the other hand,

the student's judgment proves better than that of the faculty, and it appears that he really is constitutionally incapable of getting benefit from the subject which he would fain avoid, it is surely unfortunate that this discovery should be deferred until junior year, a period when his time is more valuable and the distraction from his individual interests is more keenly felt.

The chief defect of the present system, therefore, in its application to the first two years of the course, has been its failure to accomplish effectively the distribution of the student's work in representative parts of the field of studies. The defect in its application to the last two years has been of an opposite kind, in its failure to require such concentration in some one part of the field as may properly be expected of mature students whose faculties have been trained and whose interests have been developed. Most students do not need compulsion to this end, tho of these many would certainly profit by guidance. Many others, however, possibly bewildered or attracted by the variety of subjects thrown open to their choice, possibly seeking deliberately a smattering of knowledge, lay waste their powers in unrelated lines of work. The present major does demand the prosecution of a subject thru three or four years, but it absorbs in the last two years only one-fifth of the student's time (six hours out of thirty); the student often enters senior year with only two or three hours of work a week prescribed for him with any approach to definiteness. The dispersion of interests, which may be a virtue at the beginning of the course, becomes a vice at its end.

A cardinal feature of the new plan is the recognition, made now more distinct than ever, of the difference between the first two years and the last two years of the college course. The two halves of the curriculum have in the past been treated differently, as noted above, in the variety and character of the instruction offered. The courses of freshman and sophomore year have been subjected again to a critical examination, and tho some new courses have been added, the total number has been cut down, in the effort to restrict the courses to those

which have shown themselves to be of the greatest disciplinary value, and most readily comprehended by the average underclassman.

The plan aims not only to confine the work of the first two years in this way, but also to guide the younger student more directly in the combination of his studies, and, by making him acquainted at the start with the elements of subjects in each of the three main divisions of the field of study, it aims to prepare him better to choose and prosecute his major work during the last two years.

The existing requirement of three minors, distributed in different divisions, is exprest in certain definite freshman and sophomore groups described below, while in place of the present major, which has proved to be but a thin thread in many cases, the rules will require in the future a substantial block of the last two years (in some cases amounting to fifteen hours, or half of the normal classroom work), divided between a major and some minor subject related thereto. That students may be prepared for a wide choice of their major subjects, they will be guarded from the danger of undue specialization in their first two years; and while a certain amount of continuity in the work of those years will be required, the groups have been arranged so as to protect a man from the results of mistaken choices, made before he even entered college, and based on schoolboy preferences. The freshman may enter a different group in sophomore year; and even to the end of sophomore year will have before him a considerable variety of subjects from which he may choose his major study and its related minor.

In arranging the groups of freshman year a study was first made of the actual choices of recent years. These choices were found to run, in large part, along clearly distinguishable lines. Some of the combinations, however, were evidently better than others for the average student, in securing the proper basis for later development; some were distinctly inferior in that they neglected fields of study which are important in any liberal education, and thereby narrowed the possibilities of future work.

The one most popular combination of freshman subjects, for example, (chosen by 44 men in a class of 317), was English, Latin, French, German, and history. We may agree that each subject is good in itself, and well suited to a college freshman, but we must judge the combination not only by what it includes but also by what it leaves out; and the entire neglect of science in this combination certainly makes it, for the average man, inferior to one which includes a course in mathematics, physics, or chemistry. It is for the average man that the rules are framed; express provision is made for the exemption from the rules of exceptional students whose attainments already satisfy the object of the groupings.

The faculty has selected, therefore, from the possible combinations of freshman subjects, those complying with requirements which, in its opinion, may properly be imposed on the average student. Briefly stated, the conditions to which combinations of subjects must conform, are as follows: (1) one course is required in each of three main divisions of the field of studies; (2) French or German is required; (3) Greek or Latin is required unless a student takes both mathematics and a science; (4) students may take both physics and chemistry only by exception, that is, when they have already studied the mathematics of freshman year.

More than half of the possible combinations of the freshman subjects, now nine in number, fail to conform to these conditions. The combinations which satisfy them, and are therefore acceptable, may be exprest in the form of groups, which, as printed below, are arranged in conformity to the division of the field of studies in three parts, and so may indicate to the student, at the beginning of his course, the line of work for which his combination best prepares him.

GROUP I. 1, Latin or Greek; 2, French or German; 3, mathematics or physics or chemistry; 4, the alternative ancient or modern language; 5, English or history.

GROUP II. 1, French or German; 2, mathematics; 3, physics or chemistry; 4, 5, English and history, or, in place of one of these, either Latin or Greek or the alternative modern language.

GROUP III. 1, Latin or Greek; 2, French or German; 3, mathematics or physics or chemistry; 4, English; 5, history.

In sophomore year the change which is likely to have the greatest practical effect is the revision and simplification of the courses, to which allusion has been made above. The plan governing the combinations of courses which students may elect is little more than a restatement of the present minor requirements, assuring a distribution of work in different parts of the field; but henceforth this dispersion of work will be a necessary part of the sophomore, as well as of the freshman curriculum, and may not be postponed. The faculty has had to face a difficult question in deciding the number of freshman subjects which must be continued in sophomore year; it is eager, on the one side, that the student should realize the advantages which result from sustained study of definite subjects, and, on the other side, it is reluctant to bind students too closely to lines of work for which they exprest a preference when they scarcely knew their own minds. During the coming year sophomores will be required to continue two of their freshman subjects, lying in different divisions of the field of studies; the requirement may later be made more strict if it appears that this may be accomplished without confining unduly the choice of the later major and related minor, in preparation for which certain sophomore courses will be necessary.

Subject to this requirement sophomores will make their choices within the following groups of subjects, which, like the freshman groups, are arranged in accordance with the general division of the field of studies, to indicate the direction in which a given group leads.

GROUP I. 1, 2, two of the following, Latin, Greek, French, German (also Italian [2] or Spanish [2]); 3, mathematics or physics or chemistry or biology; 4, psychology (with logic) or history or economics; 5, English or any other sophomore subject.

GROUP II. 1, French or German (or Italian [2] or Spanish [2]); 2, 3, two of the following subjects, mathematics, physics, chemistry, biology; 4, psychology (with logic) or history or economics; 5, English or any other sophomore subject.

GROUP III. 1, Latin or Greek or French or German (or Italian [2] or Spanish [2]); 2, mathematics or physics or chemistry or biology; 3, 4, two

[2] Open to sophomores of good grade in freshman year, and counted as part of the sixty hours required for graduation only on condition that it

of the following, psychology (with logic), history, economics; 5, English or any other sophomore subject.

It may be proper to explain briefly the exceptional position in which the study of English is placed by this plan. The subjects of study in the first two years are, as noted above, designed to be those of the greatest disciplinary value for the more immature of the college students. The introductory course in English has certainly justified its position in freshman year; it teaches an appreciation of the best literature by means of a thoro study of a few important works. When the faculty of appreciation is once developed, it seems safe to trust to the natural attraction of the subject to secure those students who will profit most by its study, and unwise to treat it as tho it were a perfect substitute for the courses in foreign languages. Every sophomore may study English, under the conditions of the groups, but he may also forego its study if he chooses to apply himself to a different discipline.

Another point is noteworthy in the scheme of studies. In contrast to many colleges, which in other respects are more lenient in their demands, Yale has not, either under the old plan or the new, a single "required" study in its curriculum. Students must work in certain parts of the field, but in no case are they held to a definite subject or course. Actually, some studies are taken by most of the students; the freshman course in English, for example, is studied by over 95 per cent. of the class. In arranging the groups the question naturally arose whether a course like freshman English, the value of which is generally recognized, might not be required of all students. It is interesting to note that the strongest opposition to this proposal came from those who are most closely connected with instruction in the subject, and those others who are most firmly convinced of its value. They felt that in a fair field, where the attractions and advantages of the subject were not likely to be obscured, it was preferable to leave to students the right of choice; and that under these conditions the loss, (always somewhat problematical), to the

is followed by the succeeding junior course in Italian or Spanish, respectively. No sophomore may begin the study of two modern languages.

students who did not take this particular course, would be more than outweighed by the benefit to the course itself and to those who did take it. One heritage, at least, from the elective system, appears to be treasured at Yale: the conviction that a course which may not be avoided is prejudiced in the eyes of the students, is deprived of one very useful measure of efficiency, and fails to stimulate the teachers.

If, in taking up the last topic, the major and minor of the new plan, the discussion in this paper is brief, the reason is certainly not that this feature of the plan is unimportant. It is, on the whole, the most sweeping change of the system of study. Some of its aspects, however, have already been anticipated, and it remains merely to summarize the regulations and to call attention to their significance.

Juniors and Seniors will hereafter be required to complete a major in one subject and a minor in another related subject, aggregating together about fifteen hours, or one-half the total work of the last two years. The department of study in which the major is given will prescribe more or less definitely the courses of which the major is to be composed, but departments covering a broad field, such as history or philosophy, will offer major courses in several different lines of work. The department in which the major is given will also determine the subjects and courses which promise the best results when pursued in connection with the major, and will offer the choice of one among several "related minors." No definite rule prescribes the hours in major and minor, but it is expected that the normal distribution will be nine and six respectively. Departments will differ, undoubtedly, as regards the definiteness of the combinations which they offer; in many subjects alternative courses will be offered within a major, and when the character of the subject makes this permissible it seems a practise to be encouraged, as permitting students to choose more freely from the courses given outside the line of their major interest.

In general, however, the combinations will be far more rigid than in the past. In this fact, in the coupling of two related subjects, and in the postponement of the major work

until the last two years of the course, lie the chief novelties of the new system.

Opinions will differ, naturally, as to the benefit to the student which may be expected from this new plan of work. The benefit to the faculty, in stimulating a comprehensive view of the whole college curriculum, a critical scrutiny by each department of the courses which it must now group in major combinations, and a more effective cooperation between departments charged with related subjects of study, is already apparent.

CLIVE DAY

YALE UNIVERSITY

# IV

# THE TRAINING OF TEACHERS OF MATHEMATICS IN PROFESSIONAL SCHOOLS OF COLLEGIATE GRADE [1]

## I. DEVELOPMENT OF SCHOOLS AND COLLEGES OF EDUCATION

Twenty years ago no professional training of university grade existed in this country to prepare teachers of mathematics for secondary schools. At that time the young teacher's sole preparation for his work was the taking of as many academic courses in mathematics as possible, plus, in some instances, a course on the history of education or some lectures on general pedagogy. On graduation he had had no observation of skilful teaching in secondary mathematics, no practise work, no survey of secondary mathematics from a higher and pedagogic standpoint, and no knowledge of the best literature dealing with the teaching of algebra and geometry in this country and abroad. He gained all his experience in the classroom, and, if progressive, he also acquired a certain pedagogic equipment from private reading and from teachers' associations; if not, his point of view on questions of teaching remained narrow, as is always the case when one fails to come in contact with what others are doing in his field of work.

Five years later we find conditions thruout the country in general the same with, however, several notable exceptions. At least five different educational institutions [2] had by this

[1] Report submitted on January 8, 1911, to the International Commission on the Teaching of Mathematics, by Committee XII, Subcommittee 1; Chairman, C. B. Upton, Teachers College, Columbia University; R. D. Bohannan, Indiana University; L. G. Weld, University of Iowa; C. D. Rice, University of Texas; A. L. Candy, University of Nebraska.

[2] University of Michigan (1893), Michigan State Normal College (1893), Teachers College, Columbia University (1894), Syracuse University (1895), and University of Chicago (1895).

The dates indicate the year in which the course was first given.

time established courses on the teaching of algebra and geometry which, together with a course on general pedagogy, formed a certain professional training for high-school teaching in mathematics. Up to 1900 only four other colleges[3] are known to this committee to have added courses on the pedagogy of secondary mathematics to their programs.

The past ten years have shown far greater interest in pedagogical matters, and a much more rapid growth in courses of this kind. At present about twenty-five other colleges,[4] in addition to those above mentioned, have developed such courses as *The history and pedagogy of secondary mathematics, The teaching of mathematics in secondary schools,* and *Teachers' course in algebra and geometry.*

For the other high-school studies, such as Latin, English, German, physics, and chemistry, there has been a corresponding development of professional courses on the teaching of these subjects.

This general interest in the professional preparation of teachers for secondary education, which is thus being shown in many of our American colleges and universities, has led to a feeling on the part of a number of these institutions that teaching must be recognized as a profession, and that training for it must be as formal and definite as for law, medicine, or engineering. This has resulted in the establishment at a number of our universities of schools of education, each with a formal organization and a separate faculty, these being considered as professional schools and as such ranking, in general, with the schools of law, medicine, and engineering. In these schools attention has been given particularly to

[3] University of Pennsylvania (1897), University of Indiana (1898), Albany Normal College (1898), and University of Illinois (1900).

[4] Eleven of the more prominent are New York University (1902), University of Texas (1903), University of Missouri (1903), University of Minnesota (1905), University of Cincinnati (1906), University of Nebraska (1907), Cornell University (1907), University of Wisconsin (1907), University of Iowa (1908), Drake University (1908), Ohio State University (1909).

preparation for secondary teaching, as the various state normal schools have, in general, solved the problem of preparing teachers for the elementary schools.

Of the various schools of education now existing in the United States the oldest are Teachers College of Columbia University and the School of Pedagogy of New York University. Teachers College was founded in 1888 as a privately endowed institution under the presidency of Nicholas Murray Butler, and was then known as the New York College for the Training of Teachers. It was a school of university grade and enjoyed reciprocal relations with Columbia University. In 1898 it became one of the professional schools of Columbia University, ranking with the Schools of Law, Medicine, and Engineering. Teachers College was the first professional college of education of university grade separate from a university, tho now a part of Columbia University.

The School of Pedagogy of New York University, established in 1890, takes rank with the other professional schools of that institution, and may be said to be the first professional school of university grade directly connected with a university.

In 1901 a School of Education with a distinct faculty and ranking as a professional school was opened at the University of Chicago, and has since become one of the prominent institutions of this kind. Within the last five years, at least eleven other universities [5] have organized similar schools or colleges where the professional training of teachers is carried on. In

[5] University of Cincinnati, College for Teachers (1905); University of Texas, Department of Education (1906); Syracuse University, Teachers College (1906); University of Missouri, School of Education (1906); University of Minnesota, College of Education (1906); University of Indiana, School of Education (1907); Ohio State University, College of Education (1907); University of Iowa, School of Education (1907); Drake University, College of Education (1907); University of Illinois, School of Education (1908); University of Nebraska, Teachers College (1909).

(The dates indicate the year of establishment of the School of Education. By a comparison of the above with the foot-notes on p. 1 and 2 it will be seen that in some universities courses on the teaching of secondary mathematics existed before the organization of a formal school of education, while in others such courses came after the establishment of the professional school.)

all but two cases [6] these schools rank with the other professional schools of the university.

In addition to the above-mentioned institutions, connected with universities, there are at least three normal colleges,[7] separate from any university or college, where work in the training of teachers is of collegiate grade and leads to a recognized bachelor's degree. These three institutions offer both academic and professional courses in preparation for secondary teaching.

The work in all of the above schools or colleges of education differs from that offered by a university chair or department of education in that a far more liberal offering is made in professional courses of study. In these schools one finds courses in general and educational psychology, the history and philosophy of education, school administration, foreign school systems, secondary education, etc., in addition to courses on the teaching of each of the secondary subjects, often accompanied by systematic observation and practise teaching of the subject under expert supervision in some high school. The academic preparation of the prospective teacher is usually carried on for two years in the regular college department of the university before the pupil enters the school of education, and is continued in the college department along with the professional courses in the school of education. In general, academic work is not done in the school of education, the courses there offered being strictly of a professional nature. The principal exception to this is found in those professional schools which are not connected with a university. In all of these schools the professional courses are credited toward the bachelor's degree, and in a few of these institutions graduate courses leading to the master's and doctor's degrees in education are also offered.

It is the purpose of this report to deal only with the training of teachers of mathematics as carried on in the above-mentioned schools or colleges of education. For a description

[6] Universities of Illinois and Iowa.

[7] State Normal College, Ypsilanti, Mich.; State Normal College, Albany, N. Y.; and Normal College of the City of New York.

of the work done in training teachers in normal schools, and in colleges and universities where no school of education exists, one should consult other reports of the American Commission.

## II. THE AIM OF SCHOOLS AND COLLEGES OF EDUCATION

So far as mathematics is concerned it is the aim of all of these colleges of education to prepare teachers and supervisors of mathematics for public and private high schools. Some of these institutions also have facilities for equipping teachers of mathematics for departmental work in elementary schools, and instructors in methods in mathematics for normal schools. At a few schools of education opportunity is offered to principals and teachers to fit themselves for the study of special problems in the teaching of mathematics, such as constructing courses of study for elementary and high schools, and especially courses in mathematics which fill the particular needs of manual training, commercial, industrial, trade, and other specialized forms of schools. The courses found in several of these professional schools are very helpful to those preparing to teach academic courses in mathematics in colleges and universities, while extensive and complete preparation is possible for those who wish to become professors of the pedagogy of mathematics. Facilities are also offered to prepare for research and teaching in the history of mathematics.

## III. THE PRESENT UNDERGRADUATE PROFESSIONAL PREPARATION FOR TEACHING IN SECONDARY SCHOOLS

In each of the seventeen schools of education considered in this report the minimum training of a professional nature for secondary work is a definitely organized course on the teaching of secondary mathematics. This course varies in length from 17 to 90 hours of class work, the average for all of the institutions being 48 hours. The method of handling the course is, in general, by lectures, recitations on assigned readings, discussions, written reports, and quizzes. The subject-

matter of this course varies somewhat in each institution, tho certain topics are common to practically all of the courses. That some notion may be formed of what is being done in such work the following composite syllabus, prepared from the syllabi sent in by the leading institutions, has been arranged, and may, therefore, be regarded as a sort of maximum course. The course treats such topics as the reasons for teaching algebra and geometry, the historical development of these subjects and of the methods of presenting them, the world's best literature concerning the teaching of mathematics, the mathematical curriculum in American and foreign secondary schools, the adaptation of a curriculum to the needs of various types of schools, a study of typical American and foreign texts for secondary schools, and the various movements to reform the teaching of secondary mathematics at home and abroad. Some attention is often given to the methods of conducting a recitation in mathematics with discussions of the heuristic method, the laboratory method, the no-text method, etc. The course also contains a review of typical parts of algebra and geometry offering scientific or pedagogic difficulties, such as the number system of algebra, equivalent equations, factoring, theory of exponents, simultaneous quadratic equations, graphic solutions, the foundations of geometry, the sequence of propositions, the treatment of parallels, loci, limits, incommensurable cases, methods of attacking exercises in geometry, and the nature of the problems and exercises of algebra and geometry. The reading of current periodical literature on the teaching of mathematics and the discussion of such topics as teaching algebra and geometry together, the fusion of plane and solid geometry, etc., are often included.

Such books as Smith's *The teaching of elementary mathematics* and *The teaching of geometry,* and Young's *The teaching of mathematics* are frequently used as outlines or texts for such a course. Fine's *College algebra* and *Number system of algebra,* Chrystal's *Algebra,* and the histories of mathematics by Ball, Fink, Cajori, Gow, and Allman are frequently reported as reference books.

The prerequisites in mathematics for the above course are one year of college mathematics in about half of the cases and thru the calculus in others. Even where the former requirement exists, it usually happens that most of the students have had the calculus and such courses as the theory of equations and projective geometry as a minimum preparation before entering the pedagogical course. This pedagogical course is normally taken in the senior year.

In connection with the above course on the teaching of secondary mathematics twelve different colleges of education offer systematic work in observation and practise teaching in secondary classes, which receives academic credit. This work is carried on in most cases in a special high school connected with or under the direction of the school of education. In a few cases arrangements are made for such practical work in public city high schools. The amount of observation and practise teaching required varies from thirty to sixty hours of work.

In some of these colleges other professional courses in preparation for the teaching of mathematics are given in addition to the teachers' course above mentioned. A distinct and separate course on the history of mathematics is offered in seven of these institutions, while in several others such historical work is a definite part of the course on the teaching of mathematics. This historical course aims particularly to show the evolution of the science of mathematics and to trace the causes which have led to its development or stagnation in various epochs. Work in surveying, designed especially for prospective teachers, is also offered at several schools. At Teachers College of Columbia University and at the School of Education of Chicago University several additional interesting professional courses are found, such as *Encyclopedia of elementary mathematics for teachers, Applied mathematics for teachers in secondary schools, Psychology of number, Teaching of secondary mathematics in Europe,* and *Critical review of secondary mathematics.*

In a few schools special certificates or diplomas, certifying special preparation and fitness for teaching secondary mathe-

matics, are given in addition to the regular degree to students who fulfil certain requirements. In some instances these diplomas are granted by the state board of education to students who have had at the school of education a certain preparation for the teaching of mathematics; in these cases the diploma is a state license to teach for life or for a given number of years. In other instances the diploma is conferred only by the college of education independent of any board of education. The requirements for these diplomas are usually as follows: courses on educational psychology, the history of education, and the teaching of secondary mathematics, with observation and practise teaching, together with academic work in college mathematics of from 15 to 24 points (a point equaling one hour of work for one semester).

## IV. THE PRESENT UNDERGRADUATE PROFESSIONAL PREPARATION FOR TEACHING IN ELEMENTARY SCHOOLS

Only a few [8] of the schools of education offer preparation for teaching mathematics in elementary schools. One reason for this is that the state normal schools offer, as a rule, sufficient preparation for this field of work. When, however, one wishes to prepare for supervision or departmental work in mathematics in the grades, and hopes to obtain the better positions, it is necessary to have further scholarship in mathematics and education, and a college degree, a type of training which can be found only in the colleges for teachers, since they begin in general where the normal schools leave off. Students who have done two years of work beyond the high school, in a normal school, are usually able to complete a course and obtain a degree in one of the schools of education by two additional years of study. A part of the preparation for work in the elementary schools is a course on the teaching of arithmetic corresponding to the one described above on the teaching of algebra and geometry. The syllabus is of the

[8] Teachers College of Columbia University, School of Education of Chicago University, College for Teachers of the University of Cincinnati, Albany Normal College, and the Michigan State Normal College.

same general type as that for secondary mathematics, except that arithmetic and such parts of algebra and concrete geometry as are taught in the elementary school make up the subject-matter for discussion. Students taking such a course have often had a year's work in college mathematics, while the most serious students have usually had more. In Teachers College at Columbia University students also take a thoro course on higher arithmetic, in which special attention is given to modern business practises. In the School of Education of the University of Chicago a course on the psychology of number is usually taken. In addition students generally elect very freely related courses in the departments of psychology and elementary education. Opportunity for practise teaching and observation in elementary mathematics is offered in connection with this work. It should be added that students who are studying seriously the problems of teaching mathematics in elementary schools usually take also the full preparation for teaching in secondary schools, in order that they may better appreciate the nature of the secondary school work to which the elementary school courses are leading.

### V. GRADUATE COURSES IN THE TEACHING AND HISTORY OF MATHEMATICS

Graduate courses in the teaching and history of mathematics leading to the master's and doctor's degrees are found only at Teachers College of Columbia University and at the School of Education of Chicago University. In these two institutions research courses are conducted on the seminar plan, in which the students work on individual topics relating to the history and pedagogy of mathematics. The prerequisite for these courses is a bachelor's degree which should include a course on the teaching of algebra and geometry in addition to a generous amount of college mathematics. Students who have not had courses on the history and pedagogy of secondary mathematics usually take these courses parallel with the graduate work. A large number of the students pursuing these courses are those who have already had considerable

experience in teaching. The work is adapted to the needs of the various classes of students. It is taken by those who wish further preparation for secondary teaching as well as by those who aim to become heads of departments of mathematics in high schools. One also finds a number who are fitting themselves to teach methods in mathematics in normal and training schools.

There are also a few students who are preparing to teach mathematics in colleges and universities. This seems to be a good omen, for it indicates that students are beginning to realize that there are important pedagogical problems to be solved, especially in connection with the teaching of the first year of college mathematics where, in general, more poor instruction is found than in any other place in our educational system, a situation which is easily explained, for as a rule the teachers in the first year of the college course are young men, fresh from the study of higher mathematics, who have never had experience in teaching and who have never so much as discust the most elementary topic in relation to such work. The fact that the men who are preparing in the schools of education for this college work usually follow at the same time the courses offered on the teaching of secondary mathematics shows that they realize that the problems of teaching in the first years of college are almost identical with those in the last two years of the high school. France and Germany long ago fully appreciated this when they included in the courses of study for their secondary schools the mathematics which we usually teach in the first two college years. The further fact that these young men also pursue as many advanced courses as possible in pure and applied mathematics indicates that they feel strongly the necessity of combining mathematical scholarship with this pedagogic training. In these schools of education there is no dogmatic instruction in reference to college training; such work would be fatal. In the seminars these students usually work out some problem connected with freshman or sophomore college work and, at the same time, get fully in touch with all of the movements and problems in secondary teaching which bear so directly upon

their field of work. They thus obtain a broad basis for the pedagogy of freshman college mathematics; they get perspective if nothing else.

In these graduate courses men are also prepared for college teaching and research in the history of mathematics. The facilities for this work are exceptional at Teachers College of Columbia University where very complete libraries[9] of old mathematical books and manuscripts are available for the use of graduate students. In the seminars one also finds a number of principals and supervisors who are interested in the new types of industrial, trade, and commercial schools, which are so rapidly springing up in this country, and who are working on special studies relative to the courses of study in mathematics adapted to the needs of these schools.

## VI. PRESENT TENDENCIES

A number of the schools of education report plans for enlarging the work for the professional training of teachers of mathematics. In several of these colleges where short courses on the teaching of secondary mathematics are now offered it is proposed to make within a year or so a considerable increase in the length of the course. In a few institutions where no practise teaching or observation is now given it is hoped to mature arrangements for such work in the near future. In a number of other schools serious efforts are being made to increase the efficiency of this work especially on the side of practise teaching.[10] Several professors have also announced their intention of offering courses on the history of mathematics; others are planning graduate courses in the teaching of mathematics. At several of our colleges of education there seems to be a strong feeling that secondary

[9] The large private libraries of Professor David Eugene Smith and George A. Plimpton, Esq.

[10] An interesting article on "Practise work in university departments of education," by F. E. Farrington, has recently appeared in the Bulletin of the University of Texas, No. 134, November 1, 1909. It may also be found in the publications of the National Society of College Teachers of Education for 1909.

teachers should have a synoptic course in mathematics somewhat along the lines of Klein's *Elementarmathematik vom höheren Standpunkte aus*. There is no question as to the advisability of such a course; the main reason why such work has not been more generally given in America is probably the lack of a suitable textbook. As a number of American professors are now jointly preparing a work of this kind, courses of this nature will soon be found, no doubt, in a number of our teachers' colleges.

## VII. CONCLUDING REMARKS

The ideal preparation for teaching in secondary schools and the first two years of college should be something more complete than that now generally found. On the side of scholarship it should approach the completeness of the preparation in France and Germany, where one must have a state license, obtained only by passing a most rigid state examination, before he can hope to do anything worth while in secondary teaching. On the other hand, it would probably be detrimental to the life and elasticity of our system if a similar license should be demanded in this country. Yet with us, where the public is now beginning to recognize that teaching is a profession, a feeling which will undoubtedly increase as the years go by, the time will undoubtedly come when secondary teaching will be sufficiently attractive financially to enable us to demand from the prospective teacher some such preparation as the following. On the side of pure mathematics we may expect the calculus, differential equations, solid analytic geometry, projective geometry, theory of equations, theory of functions, theory of curves and surfaces, theory of numbers, and some group theory. On the applied side we should demand a strong course in mechanics, theoretical and practical astronomy, descriptive geometry, and some mathematical physics with a thoro course in experimental physics. To this should be added special courses on surveying and general applications of mathematics that the student may see to what all of the above work is leading. As

pedagogical training there should be included a strong course on the teaching of secondary mathematics with observation and practise teaching under expert supervision, a course on the history of mathematics, at least one graduate course on the history and teaching of mathematics, and a course of an encyclopedic nature dealing critically with the field of elementary mathematics from the higher standpoint. A foundation in psychology and the history of education is also necessary. Such a preparation may at first seem excessive, but it is the ideal, and, with the exception of about half of the pedagogic training outlined, it is no more severe than the requirements in France today for the secondary teaching license known as the *agrégation*. We can demand this if the public will give teaching the recognition it deserves. The widespread interest existing at present in Europe in reference to the teaching of mathematics leads one to expect to find there in the near future something more closely corresponding to the pedagogic training given in this country in the various teachers' colleges. France and Germany have the practise teaching and observation, and also the critical survey of the field of elementary mathematics from the higher standpoint, but as yet they have practically nothing corresponding to the American courses on the teaching of secondary mathematics. Such courses will undoubtedly come; possibly the great interest in this work in this country may influence European thought on the question.

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# V

# AGRICULTURE IN THE PUBLIC SCHOOLS

## INTRODUCTORY NOTE

The rise of instruction in the science and art of agriculture in the public schools is of recent origin. It may, in a general way, be said to have had its rise with the opening of the present century, tho a few successful beginnings were made before then. Progressive teachers, enterprising farmers, and successful business men have been quick to see the advantages to be gained from the introduction of this subject into the program of studies for the public rural, elementary, and secondary schools. There are many persons, however, who do not yet clearly see why this new subject should be given a place in our American system of public education. No subject has a right to a place in the curriculums of our public schools unless it is supported by many and weighty reasons. In this article the writer wishes to present only two of the many reasons why agriculture should be taught in the public schools.

## THE PROBLEM OF INTENSIVE AGRICULTURE

One reason why agriculture should be taught in the public schools is that, as a nation, we must begin to work out the solution of the problem of intensive agriculture. The rich virgin soil that our grandfathers and great-grandfathers first cultivated in America is being rapidly impoverished. The fertility of our soil is being exploited just as are our other natural resources of the forests, the mines, and the rivers. By wasteful and unscientific methods of farming, we are preparing to transmit an impoverished soil to the future in-

habitants of this country. Even now, there are many abandoned tracts of land in this country—land that may be purchased at ridiculously low prices. Already there are agrarian conditions, caused by an exhausted soil, that should not exist within the boundaries of this nation.

In the past we have been exploiting our soil; from henceforth we must endeavor to conserve its fertility to the end that the conditions of life may be ameliorated for the multitudes of our race that shall inhabit this land after us. We, as a people, have much to learn from other nations in matters agricultural. The Germans, from fields that have been tilled for the past thousand years, are able to produce an average yield of twenty-eight bushels of wheat per acre; while we Americans, from a new soil that has been farmed only one-tenth so long—about a century—are producing an average yield of only fourteen bushels of wheat per acre. The Chinese can do still better than the Germans. In that ancient and crowded country of China, the inhabitants have been driven to find a solution of the problem of intensive agriculture; and even here there has been no complete and satisfactory solution of this problem, owing to a limited scientific knowledge. A case has recently been reported of a Chinaman, who, from two and one-half acres—which, in China, is considered a good estate,—supports himself, his wife, ten children, one cow, and two pigs. There is not an Anglo-Saxon living that can accomplish such a feat! Consider what an American farmer might do with a forty-acre farm, if he understood the science and art of agriculture as does this Chinaman. He might feed, clothe, and shelter thirty-two adults, one hundred and sixty children, sixteen cows, and thirty-two pigs,—and then have enough left to spend on improvements and pay the necessary taxes. In this comparison the advantage would be on the side of the American, because the latter would have a better soil and the use of labor-saving machinery.

The American people of the future must either learn the lesson of intensive agriculture, or starve, or fight. These three are the only alternatives. During the past history of

this nation our population has, on the average, doubled every twenty-five years. The returns of the present census show a population of about 91,000,000, for the contiguous North American territory. If our people continue thus to increase during the next century, the United States will have the enormous population of 1,456,000,000 persons within her borders in A.D. 2010—and all this multitude must be fed, clothed, and sheltered by the products from the same area that we now possess, large portions of which are of doubtful arability, and other portions depleted of fertility. By our present methods of agriculture, it will be impossible to supply the needed necessaries of life. The average density of population will be 480 persons to the square mile, or nearly equal to the most densely populated country of Europe, and Belgium does not raise nearly enough from her area to feed, clothe, and shelter her people, but the raw materials for doing this must be supplied by commerce from less densely populated countries of the world. There are no more new lands to be discovered and subdued to which our children's children may migrate as did our great-grandfathers. The people of that future day will, therefore, be compelled to practise successfully an intensive agriculture, or starve, or wage a war of extermination upon other races of mankind in order to secure additional areas from which to subsist.

It may be argued that our people will not increase so rapidly in the future as they have in the past. We have, however, no assurance of that fact. The increase in the population of the United States is due to two causes: the immigration of foreign peoples, and the natural reproduction of our own native races. It is doubtless true that, as time advances and this country becomes more densely populated, there will constantly be an ever-increasing backward pressure on immigration until finally an equilibrium will be reached. This equilibrium will be reached when all portions of the earth, where the struggle for existence is equally severe, are populated with an equal density. But, while our area is being more densely populated, other countries will continue to experience a more and more dense population thru the medium of natural re-

production, and this will tend to favor immigration, perhaps for several centuries, unless preventive legislation shall interfere. On the other hand, with the promotion of peace among the nations of the world, there will be less destruction of human life from the source of war and the attendant diseases and calamities, while the virility of the sex instinct of our people gives no serious evidence of diminution. The present indications are that, with respect to the increase of human beings, history will repeat itself, and even if the tremendous population anticipated is not realized within the time above appointed, yet it is certain to come, if a century more of time is needed.

To show that the apprehension of an over-population is not a mere fantom, let a modern example be cited. Since Japan threw her doors open to the nations of the world, she has had a wonderful increase in population. During the past thirty-five years she has had a total increase in population of about sixteen millions. Her latest census returns (1908) show a population of 49,581,928, or 336 persons to the square mile. As large portions of the Island Empire are not arable, it has come to pass during recent years that the nation is unable to produce enough food for its own inhabitants. Most of the imports are foodstuffs. The tiller of the soil has been forced to obtain a living from the products of a very small area of land—the average holding for each family being two and one-half acres.[1] The system of tillage is extremely thoro, two and even three crops being raised annually on one piece of land where climatic conditions permit. We thus see that, during the opening years of the twentieth century, there existed an economic necessity for expansion.[2] The immediate agricultural possibilities of the nation had reached their limit. The acquisition of other lands was necessary, or starvation would be the inevitable lot of a large portion of the people. The solution of the problem was reached by the

[1] Alfred Stead: *Japan by the Japanese*, p. 413. New York: Dodd, Mead and Company, 1904.

[2] F. A. McKenzie: *The unveiled East*, p. 10. New York: E. P. Dutton and Co., 1907.

forced annexation of Korea to the Empire of Japan, and the emigration of large numbers of the Japanese to that sparsely inhabited peninsula.

Our Anglo-Saxon civilization can not be supported on a hungry stomach, or an unclothed or unsheltered body. Our people must have ample food, clothing, and shelter, if they shall continue the development, or only the support, merely, of our very complex and high state of civilization. Better a hundred years for our country to grow in than, like Rome, a century in which to decay. Now is the time to begin to learn the great and vital lesson that is sure to be forced upon future generations. This is one of the many reasons why many states are getting ready to teach the subject of agriculture in all their schools. It is not only a means of present prosperity, but will, it is hoped, eventually result in the amelioration of the conditions of life for the thousands who are to come after us. Sooner than any other class of citizens, the American school-teachers should awaken to their responsibility in this matter of popular agricultural education and rise to make an opportunity for its introduction into the program of studies of our public schools.

### A POPULAR SCIENTIFIC AGRICULTURE

There can be no intensive agriculture without a scientific agriculture. The conservation of the fertility of the soil implies the application of scientific methods to the art of plant and animal production. These two conditions are inseparable; for the first result may be obtained only thru the second means. Before the state can realize the benefits of an intensive agriculture, it must first produce a generation of farmers, who shall be educated in the scientific principles of the science and art of agriculture.

Unscientific agriculture is wasteful. Just as an automobile may be wrecked by being operated by one who does not understand the principles of its operation and has not acquired the necessary practise in such operation, so the soil may be depleted of its fertility by being farmed by one who does not

understand the underlying principles of soil fertility and the proper methods of soil management. Likewise, improper methods of feeding and caring for livestock, and the disposal of animal products, will not secure the highest returns. Farmers must approach their life's work with an understanding of its underlying principles, and this knowledge can be had by the vast majority of farmers' sons only thru the instruction of the local public school.

In almost every community there are one or more examples of farmers who continually persist in "bringing up the rear." They are always late in the most important and regular operations of the farm, such as planting and harvesting corn, wheat, oats, etc., making hay, selling hogs and crops, paying taxes and debts. They seem somewhere to have lost one or two weeks out of their lives and have never been enabled to catch up. In most cases this affliction seems to have been transmitted from father to son for two, three, and even four generations; and today there are still a few farmers in our midst who are suffering the penalty of the "behind-time" sin that was committed by some ancestor during the latter half of the eighteenth century! The seasons, like time and tide, wait for no man. Today, as in the past, there are too many farmers who are content to follow in the footsteps of their fathers and grandfathers, no matter whether their practises of agriculture were good or bad. It is this unscientific practise of blindly following the habitual methods of farming, whether right or wrong, without knowing or considering the reasons why, that the teaching of agriculture in the public rural, elementary, and secondary schools is designed to remedy.

In 1862 the congress of the United States past the Morrill Act, by the provisions of which the first state agricultural colleges were established. These institutions have been doing an admirable work for over half a century, but they have not succeeded in reaching as they should the practical needs of the mass of farmers. This failure is recognized by both the agricultural colleges and the rural population. These higher institutions are too far removed from the common

farmer, and it is the common farmer, his wife, sons, and daughters that must somehow be reached.

On the other hand, an effort has been made to reach the country people thru the teaching of nature study in the elementary schools. Unfortunately, the instruction given in this subject usually gives but a very meager knowledge of the principles and practises of real agriculture. It has been, and still is, pursued for the avowed purpose of getting acquainted with a few of the more striking phases of nature, and its aim is chiefly esthetic. The most fundamental and elementary principles of agriculture are not touched, and never would be learned, if we depended upon nature study for them.

The only way, then, to reach the masses and impart to them the knowledge of the scientific principles of agriculture is thru the medium of the public schools. Here the present generation of farmers' sons and daughters, and the young people of the cities who may become interested in farming and country life, may be taught the theory and practise of scientific agriculture. That the instruction in the elemental principles of agriculture in the public schools does give effective results is no longer a theory to be demonstrated at some future time, but we have evidence that makes such results a matter of history. One reason why the people of Germany secure such good returns from their soil is attributable to this cause. More striking still is the fact that European peasants who immigrate to America from Germany, Belgium, Holland, France, and Sweden invariably outstrip our native farmers in raising crops. They know the essentials of spraying, tillage, soil fertility, feeding, breeding, etc. They have been taught these things from their youth up in the public schools of their native lands. It is indisputable that immigrants from the northern European countries have converted into productive, thriving, and well-stocked farms lands upon which the average American farmer could not have subsisted. In New England, these people are even now beginning to reclaim the abandoned farmsteads, and once more the early homes of the Pilgrim Fathers are to bloom and bear fruitage. "Nor should this success be attributed—as it so often is—

to a lower scale of living on the part of the foreign-born farmer. The real secret of their success is thrift and knowledge of the essentials of scientific farming. Americans should take the lesson to heart, for in this respect Europeans can yet teach us important educational facts." [3]

Scientific agriculture, as it should be taught in the schools, prepares for the business of farming. About one-third of our people are engaged in this business, and there will always be a large percentage of them engaged in the noble work of providing food and clothing for mankind. In the various professions, as in law, medicine, teaching, and preaching, men have long realized the necessity for a more or less thoro preparation before beginning active work in these callings. Even in the trades, young men are compelled to serve a term of apprenticeship before they are enabled to perform the work of a master mechanic. In agriculture, however, the matter has been quite different. We used to say, "Anybody can farm." That was only another way of saying that every one knew about all there was known on the subject, and, as there were but few principles and facts to be followed, almost anybody could engage in this industry with equal success. But we no longer speak as we used to. During the past half-century, the agricultural colleges and experiment stations of the nation have been ferreting out the facts of nature, and from these have been drawn many principles and laws applicable to plant and animal production. There are now a large body of facts, principles, and laws that are being pedagogically organized for the purpose of agricultural instruction in the rural, elementary, and high schools.

It takes brains to farm. A twentieth-century farmer must have a more or less thoro knowledge of botany, zoology, chemistry, physics, meteorology, bacteriology, geology, mechanics, veterinary medicine, law, economics, and business,—besides a knowledge of the branches usually taught in the elementary school. Men that farm by rote never make good farmers. Not all the work of the farm can be reduced to automatisms,

[3] See H. W. Foght: *The rural school of the twentieth century,* pp. 185-6. New York: The Macmillan Company, 1910.

because they are too many and too varied. Many duties of the farm depend upon the natural conditions of weather, soil, air, and sunlight. Some of the farmwork may be done indoors, but most of it is done under the open sky. To perfectly adapt and successfully apply the principles of agriculture under these various conditions, which are multitude in number, one must have a superior intelligence—an intelligence above that of the average man. In the factory, the shop, the office, and the store one does not meet with such an infinite variety of conditions. The store has its regular system and routine; the office, its regular business forms and card indexes; the shop, its comparatively small round of labor; and the factory, a single, simple piece of work for each man. Not very complex thought processes are involved in the work of the man who operates a single machine in a factory from day to day thruout the year; nor who plugs the air-holes in the tin cans in a canning factory; nor by the woman who sews the single seam in a certain garment, or who operates a typewriter eight or ten hours a day. Indeed, the young man who aspires to the high place of an agriculturist needs a more thoro preparation than the common laborer, the clerk, or the artisan.

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## VI

## A COLLEGE STUDENT'S VIEW OF EDUCATIONAL METHODS

Modern educational methods are at present the subject of much discussion amongst educators who, however, are only able to view the subject thru a glass which is impervious to the difficulties and experiences of youth. It is for that reason that the author, a college student, takes the liberty to discuss, in a brief but outspoken manner, the main defects of the methods now in vogue. The study of this question was begun five years ago, when the author's interest was aroused in the matter by the difficulty that many of his classmates experienced with the study of elementary physics. Since then he has seized every opportunity to study and to summarize the views that students of numerous schools exprest concerning their school careers. Moreover, he has attempted to place himself in different students' positions in order to confirm their views. This paper, because of the varied and numerous sources of its material, may hence be considered as dealing with the faults of the average school. The author has gone further than this in his study, for he has studied various methods of teaching until he feels able to offer some suggestions, which, however, must be made brief for lack of space.

The greatest objection to modern educational methods is the lack of business-like methods. This is especially true in the primary grades, where the teachers often instruct only when not otherwise engaged. Generally, primary and secondary school-teachers seem to make it a practise to prepare their work after meeting their classes. What do the students do during this time? They are frequently left with nothing to do except to be quiet, or else they are given some useless work mainly to keep them quiet. The students would

derive more benefit from this wasted time if it were taken off at the end of the day, when they would at least be able to enter full-heartedly into sports. The school day ought to be a day of serious endeavor on the part of both teacher and pupil, the former setting an example for the latter. The instructor should so conduct himself that he instils in his pupils a belief that energetic and full-hearted endeavor is as necessary to derive the full benefit from all serious undertakings as it is necessary to derive the full joy and benefits from sports. All teachers should bear in mind that a business-like procedure, combined with well-worded and well-prepared explanations, has a magnetic effect upon the students which can not be realized by those teachers who neglect this phase of their work.

Often, too, a teacher does not know the lesson. He has constantly to look at the book in order to see that the student's reply is correct. When asked a question upon the lesson, he is frequently unable to solve the problem at first trial, to translate without referring to the vocabulary, or to explain a point without first refreshing his mind on some previous work. Nay, a teacher may—it often happens—give a totally wrong explanation or answer. What is the effect upon us students? We can not help believing that the subject is not of much value when the instructor, who constantly repeats it, can not remember its most vital material from year to year. Hence we would advise teachers to know the lesson so well that reference to books within the classroom would be unnecessary.

Let us consider a recitation period. An oral recitation is extremely tiresome, and, moreover, does not concentrate our minds upon the subject, especially if the students are called upon in some regular order. Moreover, a classmate's recitation does not benefit his fellow students, for, as a rule, he can not make his recitation clearer than the text. Recitation work at the board or at the seats by a system of cards, for example, gives every student an opportunity to recite each day. Moreover, especially if all oral recitations are omitted, he will be able to answer questions which will cover almost

the entire ground of the previous night's work. The first part of the period should be devoted to explanations of any desired point in the lesson and to explanations of the points which gave the greatest difficulty in the previous lesson. A teacher, however, should be careful during these periods of explanation not to digress from the subject, or to give for one an explanation which the others do not need. Such an explanation can be given after class or while the other students are doing their written work. A teacher must remember that there are some students—often those who make high marks—who like to show that they have prepared their lesson by asking the silliest, remotest, and simplest questions they can devise. The example set by one of the author's instructors of telling such students the true value of their questions and compelling them to remain in after class for the desired explanation will soon cure them of the habit.

One important defect that the author has discovered in daily recitations is that they tend to keep the student's attention confined to a very limited portion of the subject. The author has consulted several students (good ones and poor ones) upon this matter, and all are of the opinion that the author's suggestion of having numerous quizzes based upon the text up to date would serve to give us a more thoro understanding of the whole, for the relations existing between various parts of the text would then be made clear. Moreover, we would obtain a knowledge of the subject as a unit instead of a knowledge of a few scattered facts and phenomena, which happen for some reason to stand out foremost in our minds. Moreover, these quizzes should not be preceded by reviews, for a student must be made self-reliant. A formal review of a subject is always considered by most students as a farce—a time to loaf.

The author agrees with Professor William McDonald, of Brown University, that a student takes too many subjects at a time. An average of four per term, without a curtailment of the number of total term-hours, the author believes would give the best results. First, it would permit more exercises per week in a subject and hence a greater amount of text per

term, thereby eliminating the continuation of a subject for years with a preliminary review—a waste of time—of the previous year's work. Second, it would keep the students constantly active in a subject and would aid them in remembering the facts, because their mutual relations and bearings would be made clear before some facts were forgotten. Hence we could, because of the time saved in reviews, take up more work in a four-year course than we are able to do at present. We do not advise this procedure with the study of a language for obvious reasons. Being mostly memory work, the study of a language should be begun in youth and continued for a number of years in order that a student may have practise in conversing in it. A college graduate today can seldom converse in a language which he has studied. The main reason is that he was prepared to read the masters of that language, not to converse in it.

What sort of books are we given to study? Some are excellent ones, while others are not worth the paper upon which they are written. Numerous books are full of typographical errors—as well as the author's errors. Imagine studying from such a book. If the errors are not told us beforehand, we waste time in trying to see how some relations or formulas were deduced. If we are told the errors in advance, we can not help being disgusted with a book whose author is so careless as to allow it to appear in such bad form. Authors of practical books should remember that some day fatal accidents may be traced to their doors simply because a practical man took a formula, for example, from their books. When a book has gone thru several editions, one has every reason to expect that all the formulas and important facts, at least, are correct. Imagine a book that is full of unnecessary explanations, deductions, and digressions which a diligent student must read if he does not want to overlook a possibly important point. He is soon apt to grow tired reading such rambling material, so that his wits are not at their best when he meets an important point. A textbook is to guide us, not to bewilder us. Moreover, it must assume that we have a little reasoning ability. If such

an assumption is unjustified, the object of texts should be to promote this quality in us. Consider a book without answers to difficult problems. Some instructors would say that it prevents us from working for the answers. However, even if we do work for the answers, it is better than not working the problems. If answers are omitted, how are we to tell that our solutions are correct? Finally we come to a time, that not being sure how some previous problems are done, we are utterly at sea with a new set of problems, simply because we can not refer to answers. Thruout the author's school career he has noticed that the use of a text with answers [1] has always brought forth better results than the use of a text without answers. There is one point that all textbook writers and teachers should remember, and that is, that conciseness and correctness are the key to successful teaching. Remember that it is your duty to train youths, to show them how to save time—not how to waste it,—and how to put their thoughts into definite and concise language. If you do this there will be less cases of truancy, for most cases are due to hatred of school methods and not to hatred of school work. The author's spirit has often revolted against the methods of instruction employed, so that, try as hard as he might, he absolutely could not become interested in a subject.

Another great mistake made in most schools is that lecture courses [2] are too numerous. In the first place, lecturers are always tempted to digress from their subjects, and, in the second place, they are apt to be subject to the fault of constant repetition. Moreover, lecture courses are not efficient when we consider the time devoted to them. A student can read and know the same material, if written in book form, in less time than is required to merely listen to a lecture and take notes. When a lecturer requires the lecture to be written up with beautiful diagrams and sketches, the course is a

[1] We do not advocate the giving of answers for elementary arithmetic and algebraic processes, etc.

[2] This discussion does not apply to lectures in the sciences which are devoted to experiments, except that such lectures ought not be required to be written up.

shameful waste of time, especially if the student is marked on the neatness and appearance of his book. Scientists and men of letters are not required to make and write up notes upon papers read before various societies. On the contrary, the papers themselves are published for their benefit in the societies' journals. Most colleges and schools have one period per week devoted to lectures by men who speak before the whole student body. If these lectures were arranged to meet the needs of the students rather than adapted to appeal to visitors, they would furnish all the practise in taking notes desirable, and quizzes upon these lectures would test the student's ability along these lines.

College graduates are often subject to much criticism on the ground that they are not practical. The author does not advise the introduction of more practical work in colleges, but he does advocate the study of theory from a practical point of view. Today more time is spent on studying how to remedy a given fault in a machine than to discover the fault, knowing the peculiarities shown by the machine. In our work in design we should sometimes be required to design a machine for a given purpose according to our own ideas and not according to some sample machine. A college should teach men to think and to put energy into their thoughts. In the sciences one should not be asked what apparatus was used in a certain experiment, but what apparatus could be used. The second question serves to stimulate ingenuity and thought; the first tends merely to develop the memory, which at its best is a dangerous thing. Marked changes will be noticed in students' marks if ingenuity is considered above memory. A poor and a good student are generally the result of the amount of time spent upon a lesson. The assigned time is generally excessive and only the "fiends" will put the required time upon a lesson. The poor students generally put the less time (less active time) upon the lesson. As a result they can not remember the facts as well as the good students, but they have to be more self-reliant and more ingenious than their apparently brighter classmates in order to prevent flunking.

The proposal to have separate schools for the poor, average, and good students is an excellent idea, but the separation should be based on mental ability and not marks. We would suggest examinations requiring thought and ingenuity to answer correctly combined with a test of a student's ability to learn a lesson (not memorize formulas, etc.) in a short time as a more substantial basis.

The author believes that many so-called poor students are merely misfits in the clothes of modern educational methods. Much can be said concerning good and poor students and the possible effects of their separation, but space does not permit. We only wish to say that the author has always taken high marks, combined with his share of honors and prizes, so that his defensive nature towards poor students and his somewhat offensive nature towards good students is the result of no personal ill-feeling towards the latter.

The author's ideal of a university formed during his high-school career never materialized. It may be well to consider in brief the requisites of a model university. It should be run on a strictly business basis. Every minute should be turned to account.[3] All students should be considered equal. In other words the pet evil (or in universities, the reputation evil) should be eliminated. Definite instructions should always be given before work is commenced and not when it is half-done. Finally, there should be cooperation between the faculty and student body in order to learn the best methods of instruction. This has already been tried at the Wharton School of Finance and Commerce, but the errors were made of not calling the poor students—those that have the difficulties—into conference, and also of not asking the students how economics ought to be taught instead of how many lectures they desired per week.

We have attempted to point out several evils of our schools, together with possible remedies in a few cases. We have, however, been forced to omit much and to confine ourselves to a very limited portion of the question because of lack of

[3] If this is done, we could take up about five years' work in four years without feeling the added burden.

space. Several of the author's friends (instructors and students) have read a longer, but by no means complete, discussion of the question by the author. The present article is the result of their suggestions to reduce the original discussion to such a length as to permit of its publication in a magazine, so that educators could see themselves as students see them.

We have been guided in this paper by a spirit of ill-will to no man. We have simply tried to hold the mirror up to nature and to show educators the other side of the question. Students have been forced to accept the educational methods of today. We were given no choice, and for that reason we can not be held responsible for the results. Progress is never made by clinging dogmatically to the practises of the past. We must walk with open eyes and weigh and consider. Educators should always remember that often the same result can be produced in several ways. In other words, if the mountain will not come to Mohammed, we can at least bring about the same mutual relations by Mohammed going to the mountain.

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## VII

## WHAT IT IS TO BE A COLLEGE PRESIDENT [1]

To labor constantly for the world with no thought of self, to find indifference and opposition where you ought to have active assistance, to meet criticism with patience and the open attacks of ignorance without resentment, to plead with others for their own good, to follow sleepless nights with days of incessant toil, to strive continuously without ever attaining—this it is to be a college president. But this is only half the truth. To be associated with ambitious youth and high-minded men, to live in an atmosphere charged with thoughts of the world's greatest thinkers, to dream of a golden age not in the past but in the future, to have the exalted privilege of striving to make that dream a reality, to build up great kingdoms of material conquest and make daily life richer and fuller, to spiritualize wealth and convert it into weal, to enrich personal character and elevate all human relationships, to leave the impress of one's life on a great and immortal institution—this, too, it is to be a college president.

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[1] From an address delivered at the inauguration of President Houston of the University of Texas, April 18, 1906.

# VIII

## CURRENT EDUCATIONAL PUBLICATIONS[1]

**Amherst college. Class of 1885.** Address to the trustees of Amherst college. Committee: E. Parmalee Prentice, chairman; Ellsworth G. Lancaster, William G. Thayer. [New York, The De Vinne press, 1910] 26p. 8°.

The committee recommends that Amherst should stand for a broad cultural education, omitting technical training, and that all available resources should be devoted to the indefinite increase of its teachers' salaries. Theodore Roosevelt, in the Outlook, February 18, 1911, p. 344-46, reviews this report at length, and pronounces it "one of the most noteworthy of recent educational documents."

**Bailey, Liberty Hyde.** The outlook to nature. New rev. ed. New York, The Macmillan company, 1911. 195p. 12°.

**Brown university.** Final report of the committee appointed to consider possible changes in the charter of Brown university, presented to the Corporation at its annual meeting June 16, 1910. Providence, R. I., The University, 1910. 58p. 8°.

**Butterfield, Kenyon L.** The country church and the rural problem. Chicago, The University of Chicago press, 1911. 165p. 12°.

**Cellérier, Lucien.** Esquisse d'une science pédagogique; les faits et les lois de l'éducation. Paris, F. Alcan, 1910. 393p. 8°.

An American university specialist in pedagogical literature says of this book: "Probably no more valuable contribution to education from a layman since the days of Spencer's Education."

**Dearborn, George V. N.** Moto-sensory development; observations on the first three years of a child. Baltimore, Warwick & York, 1910. 215p. 12°.

**Downer, Harry E.** The boy and his job. Davenport, Iowa, The Contemporary club, 1911. 32p. 8°.

**Flecker, James Elroy.** The Grecians; a dialogue on education. London, J. M. Dent & sons; New York, E. P. Dutton & co., 1910. 140p. 12°.

Presents in the form of a Platonic dialogue the author's conception of an ideal education for boys.

**Gibbs, David.** The normal training school. Ypsilanti, Mich., 1910. 13p. 8°.

Reprinted from the Western journal of education, 3:433-45, December 1910.

**How, F. D.** Oxford; described by F. D. How, pictured by E. W. Haslehust. London, Glasgow [etc.] Blackie and son [1910] 56p. col. illus. 8°.

[1] Compiled by John D. Wolcott, specialist in charge of the Library of the United States Bureau of Education, to which books and pamphlets should be sent for inclusion in this record.

**James, Edmund Janes.** The origin of the Land grant act of 1862 (the so-called Morrill act) and some account of its author, Jonathan B. Turner. Urbana-Champaign, University press [1910] 139p. 8°. (University of Illinois. The University studies, vol. 4, no. 1)

**Judson, Harry Pratt.** The higher education as a training for business. 2d. ed. Chicago, The University of Chicago press [1911] 54p. 12°.

**Kingsley, Sherman C., *ed.*** Open air crusaders; a report of the Elizabeth McCormick open air school, together with a general account of open air school work in Chicago and a chapter on school ventilation. Chicago, Ill., United charities of Chicago [1910] 107p. illus. 8°.

Copies of this book may be obtained free of charge by addressing The United charities of Chicago, 51 LaSalle street, Chicago, Ill.

**Lipps, Gottlob Friedrich.** Weltanschauung und bildungsideal; untersuchungen zur begründung der unterrichtslehre. Leipzig und Berlin, B. G. Teubner, 1911. 230p. 8°.

**Mangold, George B.** Child problems. New York, The Macmillan company, 1910. 381p. 12°. (Citizen's library of economics, politics, and sociology, ed. by R. T. Ely)

A general view of the principal social child problems of to-day. The main topics are Child mortality; Recent aspects of educational reform, including Play, Medical inspection of schools, Backward children, and the New education; Child labor; the Delinquent child, and the Dependent and neglected child.

**Marietta college.** The seventy-fifth anniversary of the present charter of Marietta college, and the 113th of the founding of Muskingum academy. Marietta, O., The College, 1910. 235p. illus. 8°.

The Diamond jubilee of Marietta college was celebrated June 12-16, 1910. Among full proceedings, this volume includes the address of President Taft on the occasion.

**Monroe, Paul, *ed.*** A cyclopedia of education. Volume 1. New York, The Macmillan company, 1911. 654p. illus. 4°.

**National society for the study of education.** Ninth yearbook, Part 2: The nurse in education. Tenth yearbook, Part 1: The city school as a community center. Tenth yearbook, Part 2: The rural school as a community center. Chicago, The University of Chicago press [1911] 3v. 8°.

**Reynolds, James Bronson.** Civic bibliography for Greater New York. New York, Charities publication committee, 1911. 296p. 8°.

Education, p. 212-234.

**Roehrich, Edouard.** Philosophie de l'éducation; essai de pédagogie générale. Paris, F. Alcan, 1910. 288p. 8°.

**Salisbury, Albert.** School management; a text-book for county training schools and normal schools. Chicago, Row, Peterson & company [1911] 196p. 12°.

**Strayer, George Drayton,** *ed.* Studies in educational administration. New York city, Teachers college, Columbia university, 1910. 69p. 8°. (Teachers college record, vol. 11, no. 5)

CONTENTS:—Introductory note, G. D. Strayer.—The layman in school administration, F. L. Wiley.—Teachers' compulsory insurance, W. C. Prosser.—State and local taxation for public schools, C. S. Meek.—School administration and supervision in Connecticut, A. C. Willson.

Teachers' pension laws in the United States and Europe. [Washington, Government printing office, 1911] 53p. 8°. (61st Cong., 3d sess. Senate. Doc. 823)

Data presented by Senator Gallinger. Ordered to be printed February 17, 1911.

**Telford, E. D.** The problem of the crippled school-child; an account of the education and treatment of crippled school-children in a residential school. London, Sherratt & Hughes, 1910. 32p. 4°.

**Tews, Johannes.** Grossstadtpädagogik; vorträge, gehalten in der Humboldt-akademie zu Berlin. Leipzig, B. G. Teubner, 1911. 142p. 12°. (Aus natur und geisteswelt, sammlung wissenschaftlich-gemeinverständlicher darstellungen. 327. bdchen.)

**Watt, William E.** Open air. Chicago, Little chronicle company, 1910. 282p. illus. 8°.

"It shows how discipline, instruction, and growth may be helped in any school. It contains the startling truths regarding energized air, and how the human body takes power from open air."—Journal of education, February 16, 1911, p. 190.

**Woolley, Mary Emma,** *ed.* Education. Boston, Hall and Locke company [1911] xviii, 397p. illus. 8°.

Education as a vocation.

# IX

# DISCUSSIONS

## THE CULTURAL ELEMENT AND ECONOMY OF TIME IN EDUCATION

The facts below came to the writer just after he had read the richly suggestive but bewildering Preliminary Report of the above committee. The record in barest outline below is an account of a family of ten children reared on a farm five miles from a post office, with moral and religious, and, indirectly, literary aims predominant in their upbringing.

Father's predilection not literary, his philosophy of life a mixture of Calvinism and the teachings of Benjamin Franklin, his characteristic traits business honesty, and, perhaps, nearsighted loyalty to his blood and a belief in the integrity and honor thus bequeathed to him, Presbyterian, his education the three R's, and two years at a typical academy, whose faculty consisted of his later father-in-law. The typical school method here consisted in memorizing such things as Pope's *Essay on man,* which stuck, selections from Ovid, Vergil, Cicero, etc., which stuck, together with arithmetical operations and general history, which also proved later to have a pragmatic value.

The mother, high-strung and emotional in temperament, a lover of good literature, and uncommonly keen in interpreting it to her children, her early life enriched by having had to play the mother's part to seven motherless children during the Civil War, Presbyterian also, first thirty years of life spent nine miles from a railroad, education under father's incidental direction, as he at the same time directed his farm and his academy of male students from many states, "graduate work" one year at the age of sixteen at a girls' finishing-school.

The oldest son thirty-three years of age. Education, up to age of fourteen, the three R's, acquired incidentally, together with much reading by snatches, listening to the mother who read to her family, and at the same time doing responsible farm work; fourteenth, fifteenth, and sixteenth years of age at village preparatory schools, one and three teachers respectively: tuition two dollars and three dollars per month respectively, board five dollars and seven dollars per month respectively; A.B. from state university at twenty years of age; high school teacher for four years, master's and doctor's degrees by the age of twenty-eight, professor in the state university at thirty-two.

Second son thirty years of age. Education practically the same up to sixteenth year, then two months at an agricultural college, same brief period at a commercial school. Now a farmer at the age of thirty, owning his farm, its equipment, and six thousand dollars in the bank.

Third son, age twenty-seven. Same early preparation, four years at preparatory school, five at the university with degrees of A.B. and A.M., one year superintendent of small school system, resigned instructorship in chemistry in a university to become a chemist in one of the big steel works.

Fourth son twenty-four years of age. Same early training, two and a half years at same preparatory school, four years at university, principal of grammar school in town of seven thousand population at age of twenty-two, member of state legislature twenty-third year.

Fifth son, age twenty-one. Same early training, two years at same preparatory school, one year at a better one, four years in the same university, just graduated and now farming.

Seventh son, age fourteen. Same early training, except that he accepted an unusual amount of responsibility for farm operations. One year at a private school, two lady teachers, tuition three dollars per month, board ten dollars per month. He will be ready for the university somewhat late (in two years, due to late start and distraction (?) of an interest in horses, cows, crops, country baseball team, and his desire to become a farmer).

Two of the girls have their bachelor degrees and are successful teachers; the other had to forego this "accomplishment" on account of a few years of ill-health. The sixth son died in infancy.

It will take them some time doubtless to understand the vast sociological experiment and the complicated machinery of the great American educational system. They even naïvely ascribe most of what they owe to anybody or any institution to their father's concession, to their mother's intercession for their education, to their mother's religion and love for ideals in good literature, and to the family habit of forming, thru this cooperative reading, ideals of life, and quietly creating permanent vistas of hope.

The education of the grandchildren will inevitably be not so simple, I am told, but the spirit will be the same, except for limitations, inevitable—but who shall say fortunate or unfortunate?

These facts of actual life, to the writer do not so much speak volumes as they persistently open and reopen them.

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## THE SIZE OF CLASSES

How large should classes be? For many years past the teachers in the elementary and secondary schools have been urging a reduction in the size of classes. We are told by the teachers of primary classes that from thirty-five to forty pupils are all that can be taught, if the interests of the pupil are to be of paramount inportance. The teachers of the grammar grades, with equal force, assert that from thirty to thirty-five should be the limit for pupils doing that grade of work. In high schools the teachers, with equal vehemence, assert that classes of from twenty-five to thirty are all that a teacher can handle successfully, and a much smaller number is preferable. The college professors have not collectively declared themselves upon this question, but if there is any analogy in the

reasoning, then college classes should not be of more than twenty to twenty-five; and, if this statement be correct, classes in post-graduate work should be even smaller. The grade and character of the work will, as a rule, determine the maximum number of students in the course. All of these claims, actual or possible, are based upon the notion of the worth of the individual. Experience has taught that large numbers of pupils can not be well taught collectively, because there is no opportunity for the teacher to get at the content of the individual mind, nor for the teacher to adapt the teaching to the individual mind. Whatever concessions have been made by the financial authorities of a town or city in the reduction of the size of classes in the public schools, have been made because the force of this argument has been felt. The cry for individualism has been sufficiently potent to elicit a favorable response.

When we come, however, to examine the methods of teaching in the colleges (methods employed in graduate and undergraduate schools alike) we frequently find classes transcending the limits even of the primary schools. The lecture method still obtains with an attendance running into the hundreds. Of course, it is supposed that this lecture method is supplemented by quizzes, discussions involving recitations, and formal examinations. Let us hope that these supplementary processes are always in operation, and that the supposition is more than a mere supposition. It would be extremely difficult otherwise to justify these courses of lectures on pedagogical grounds.

The schools of pedagogy, which are supposed to speak with a note of authority upon all educational problems, seem, however, to be grave offenders themselves in respect to the size of classes. It may be that the professors in charge of the various courses have no limit to their popularity. It may be that the students who sit at their feet have developed such mental grasp that the lecture system is all that is needed for their further development. It may be that those who are enthralled by the magic of the presence or the voice or the method of presenting the subject are simply "auditors" and not

students. It may be that professors in pedagogy are such skilful teachers themselves that they are able to accomplish what professors in other departments are unable to do. If we look at the registration in many of these courses, the summer schools particularly, we find that the numbers frequently run over one hundred. Skilful, indeed, must be the professor who can treat his subject and his students fairly with such a registration. Wise, indeed, must be the pupils who can realize the full value of such a course under such apparently adverse conditions. The veriest tyro in pedagogy knows that learning is the pupils' work; that a subject to be mastered involves a vast amount of mental reaction and some original thought. The pouring-in process never yet resulted in making a scholar; and, at the best, a lecture is a means of communicating information or of stimulation or of the creating of interest. Are we to understand from the size of the classes in many summer schools of pedagogy that these are the ideals? Nowadays, courses are accepted by boards of examiners and various school authorities. It would be of interest to learn just what value an examiner is willing to give for a course taken by a pupil in a class of one hundred or more where there is but one examination, and that a final one, upon the matter doled out by the professor in charge of the course. Have these examiners ever approximated the value of a course taken under such conditions and with such methods? Is a "course" a "course," no matter by whom given, no matter what may be the size of the class, no matter what methods prevail?

A noted divine, some years ago, when taken to task by one of his parishioners for failing to observe his own pulpit precepts, responded: "I believe in division of labor. I preach and you practise." Is this the final word of the schools of pedagogy?

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# X

## REVIEWS

**The Carnegie Foundation for the Advancement of Teaching**—Fifth Annual Report of the President and of the Treasurer. New York: Printed by the Carnegie Foundation, 1910. 113 p.

The fifth annual report of the President of the Carnegie Foundation, which covers the year ending September 30, 1910, contains the details of the business of the year and an extended and important consideration of the relations of the colleges and the secondary schools.

The report shows that to the seventy-one institutions on the accepted list there were allotted during the year thirty-nine retiring allowances and seven pensions, amounting in all to $325,199.02. During the same period thirteen retiring allowances and five pensions were allotted to persons not on the accepted list, amounting to $144,635.28. During the year twenty-three pensioners died. The income for the year was $543,881.20, and the funds in the hands of the trustees at the end of the year amounted to $11,114,056.86. Four institutions were admitted to the accepted list during the year: the University of California, Indiana University, Purdue, and Wesleyan. This part of the report calls attention to the establishment of their own retiring allowance systems by Haverford College and Brown University, neither of which, on account of the constitution of its board of trustees, is eligible to inclusion in the accepted list of the Foundation, and asserts the fact that such a system is within reach of any well-supported college or university whenever the authorities of such an institution decide that it is of equal importance with material equipment. The statement is again made in this connection that the funds in the hands of the trustees of the Foundation are insufficient to provide an adequate retiring allowance system except for a small minority of the colleges and universities

of the country, and that all that the Foundation itself has hoped to do has been to establish such a condition so firmly in a sufficient number of institutions that the principle would ultimately be accepted as a part of the American system of education. In this part of the report, too, is an admirable chapter on the relation of the college and the university to the medical school, which follows up the special bulletin of the Foundation on Medical Education in the United States and Canada and again strongly emphasizes the nature and extent of the responsibilities attaching to any institution that undertakes the teaching of medicine. "The honest college," the paper concludes, "should either offer a medical education consistent with the standards of our day, or else should retire frankly from the field."

The second part of the report on the relations of the colleges and the secondary schools is the most comprehensive and sanest statement of the causes that have contributed to bring about the present unsatisfactory conditions that largely prevail, and have produced a deplorable friction between school and college where there should have been harmony and coordination, with the natural concomitant of loss of educational efficiency. At the same time, the report makes a number of suggestions for the betterment of these conditions that, if followed out, can not fail in the end to do much to rescue this whole phase of American education from the slough of despond into which it unquestionably has fallen.

The complaint of the college against the secondary school is that the knowledge that it has imparted, or attempted to impart, is superficial and that the student coming to college has not been taught to apply himself in a prolonged or concentrated way; in a word, that the school sends to the college students who are not ready for college work, altho the studies which they are to take lead directly from those that they have already pursued. The complaint of the secondary school against the college is that while drawing the student body from it, the college makes little effort to understand the needs and problems of the school, but instead prescribes, along hard and fast lines, the course of study, irrespective of the fact

that only the minority of its students are to go to college at all.

It is bad enough in any case to have a controversy arise to cause a break in a system where there should be continuity, but it is doubly bad where, as in this case, there can be no question to any one at all familiar with the conditions at hand of the reality of the contention on both sides, for it is perfectly well-known to most of us that there is a deplorable lack of coordination between the school and the college and that the American student, to no small extent as a result of it, is superficially and inefficiently educated. This latter point is discust by the report from the point of view of the test of the college entrance requirements, from the experience of business firms which employ both college and high-school graduates, and most interestingly and valuably, since it is new and from the outside, from the five-years' experience of Oxford tutors as to the preparation of the Rhodes scholars. The consensus of opinion in this last instance, too, is that, while there is no lack of intelligence and interest, as a body these students, who come from all states of the Union, are not well grounded and have not been taught to work accurately and consecutively.

The remedy for these conditions is, from the nature of the case, neither readily to be found nor easy to apply. To bring about a better state of affairs it is necessary in the first place that the secondary school and the college should cease to regard themselves as unrelated institutions, but rather as two integral parts of a common system of education. Neither the certificate method of admission nor the piecemeal examination method have solved the problem of cooperation between the school and the college. It is recommended that in place of this there shall be a combination of certificate and examinations, the latter to be of a simple and elementary kind on a few fundamental subjects, but calling for actual mastery of them without which the student would not be admitted to college at all. The report insists on a larger freedom for the secondary school, and asserts that the boy who goes to college and the boy who goes into business from the high school are

interested alike in learning a few things well, and not many things superficially, as giving him the intellectual discipline that in either case will fit him for his future career. The college, says the report, should articulate squarely with the four-year high school on this basis of freedom, so that it may educate boys and not coach them, for in such a program alone is the "hope of scholarly betterment and of civic efficiency for both." In this same connection, the report has a chapter on the training of teachers from the standpoint of the vital need of good teachers in the equipment of both school and college, if either shall attain the full measure of educational efficiency, and the argument is made for a more careful consideration of the whole question of what and where the proper education of the teacher should be. A short chapter follows on the relations of a system of general education to a system of industrial education and the distinction between them. The report ends with a plea for an adequate state system of educational scrutiny and administration.

Like its predecessors, the fifth report of the Foundation is a document of the greatest importance to the cause of education in America, both on account of its fearless and unpartizan criticism of present conditions and its wealth of suggestion for their improvement. If many parts of it, like others that have preceded it, read unpleasantly like studies in educational pathology, no one will question on this account the desirability of their unbiased publication.

Wm. H. Carpenter

Columbia University

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**Questions on Shakespeare:** Part I, Introductory; Part II, First Histories, Poems, and Comedies—By Albert H. Tolman. The University of Chicago Press, 1910. xv+215, x+354 p. $1.75.

Among the many Shakespeare manuals *the* book is not yet. There is dire need of it, for, if one may base a judgment on examination-books, the only fact concerning the plays which is held *ubique et ab omnibus* is that their author was now "in the depths" and now "on the heights"—"now soused up to the saddle and now aloft on his tip-toes," as Nash said of

Gabriel Harvey's hexameters. The examination-books can generally be trusted to respond exuberantly to a question involving character-study or a moral issue, but matters of text, meaning, and contemporary dramatic conditions, of the stage and the whole complex of the Elizabethan background, of the poetic imagination, and, moreover, of the dramaturgic imagination subdued to what it works in, these are things apparently as yet hid from teachers in many a preparatory school and in many a college which sends presumably the pick of its graduates up to the university. For a book which should treat these things fully yet compactly, which should by means of full and frequent analysis of the plays as plays display the dramaturgic processes that have gone to their making, and by clear summaries of the results of the best modern research and criticism serve as a real guide to Shakespeare study, the need is indeed great.

It is a pity that Professor Tolman did not address himself to this task, for which he is well qualified, instead of issuing his material in the form of questions. His linguistic introduction is intended to be provocative of further research on the part of the student rather than to be comprehensive. It is useful, in spite of the somewhat imperfectly maintained historical point of view: *e.g.* (p. 67), "Shakespeare frequently employs two or even more negatives, *contrary to the best modern usage*. Vulgar English still shows these *redundant* negatives." And his general bibliography is of a sort that one would like to see issued separately in a form which every student in the class could be required to buy. But his questions themselves seem calculated to stimulate the teacher, not the pupil, and even the teacher, we think, would get more from a volume of compendious information than from the projected six volumes of questions. Doubtless Professor Tolman has found this method successful in his own classes. We should fear, however, to find the student reacting on the questions, not on the plays themselves. For a time they would possess all the challenge of a puzzle. He would "discuss" the questions calling for discussion ("Is this scene effective? How do you suppose this scene was staged? Was his per-

sonal knowledge of [the Wars of the Roses], obtained from local tradition, probably one reason for the choice of this material by Shakespeare, the Warwickshire boy?"). He would tabulate the replies that demand statistical patience ("How many beatings and threatened beatings have we in [the *Comedy of errors*]?"). Many of the questions he would frankly give up as too hard to be answered by such information as he can compass. But would he not, when he had accomplished his assigned task, feel that he had done all there was to be done with Shakespeare? Would there still hover in his restless head the one thought, the one grace, which into words no virtue can digest? Would there not be a tendency to inhibit any reaction outside the prescribed questions, as being quite valueless for the purposes of the course? We confess we don't know; as a method it would certainly kill time in the classroom; Shakespeare would probably survive. But however that may be, Professor Tolman's volumes should make, on the whole, for a more sensible reading of Shakespeare in terms of the things he himself was interested in.

HARRY MORGAN AYRES

COLUMBIA UNIVERSITY

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One is glad to see a well-printed and handsomely bound edition of Thomas More's *Utopia,* a book which is almost ready to celebrate the 400th anniversary of its birth. (London: George Bell & Sons, 1910. 442 p. 5s.)

Professor Kuhns of Wesleyan University has made an ambitious attempt in his *Switzerland.* It is nothing less than to bring together in one volume of moderate size a reasonably complete account of the scenery, the history, and the literary associations of the playground of Europe. The book is pleasantly written and the illustrations are capital. (New York: Thomas Y. Crowell & Co., 1910. 295 p. $2.00.)

*A beginner's history of philosophy* by Professor Herbert E. Cushman of Tufts College is rather a chronicle than a history. In our judgment, the student needs not so much this array of facts, however complete and accurate, but a vital interpreta-

tion of them. (Boston: Houghton Mifflin Company, 1910. 406 p. $1.60.)

He is a rash man who now undertakes to render Homer's *Iliad* in English hexameter verse. Mr. Prentiss Cummings has done this in two well printed volumes. (Boston: Little, Brown & Company, 1910. 529 p. $3.00.)

A truly delightful book is Susan Cunnington's *Stories from Dante*. The style is agreeable, the material selected with competent care, and the illustrations are attractive. (New York: Thomas Y. Crowell & Co., 1910. 256 p. $1.50.)

*Equal pay for equal work* by Miss Grace Strachan, is what is known in history as a source book. It is made up of newspaper clippings, official reports, and other similar material bearing on the long agitation which has been carried on in the City of New York to establish a schedule of teachers' salaries, regardless of sex. Such a schedule may or may not be based on the principle of equal pay for equal work. (New York: B. F. Buck & Co., 1910. 570 p. $1.00.)

Professor George F. Atkinson's *Botany for high schools* is an admirably arranged textbook. It deserves success. (New York: Henry Holt & Company, 1910. 493 p. $1.25.)

*Old Greek nature stories* by Mr. F. A. Farrar is an attractive treatment of the myths of Greece. It offers an admirable opportunity to an ingenious teacher to link together the study of nature and the study of history. The illustrations are charming. (New York: Thomas Y. Crowell & Co., 1910. 252 p. $1.50.)

The three latest volumes in the Riverside Educational Monographs are *The ideal teacher,* by Professor Palmer of Harvard; *The problem of vocational education,* by Commissioner Snedden of Massachusetts; and *The teacher's philosophy,* by President Hyde of Bowdoin College. All three well carry out the purpose of the series. (Boston: Houghton Mifflin Company, 1910. 35c. each.)

Mr. Will S. Monroe, who has written much and well of late, has given us what is probably the most readable and accessible account of *Bohemia and the Czechs.* (Boston: L. C. Page & Co., 1910. 485 p. $3.00.)

No better and more useful book on a political subject has recently been written than *The cost of our national government,* by Professor Ford of Princeton. Governmental economy is always praised in theory, and opposed in practise. Professor Ford's book is a concrete and definite setting out of facts and methods which some day the American people must face. (New York: Columbia University Press, 1910. 148 p. $1.50.)

*Open air schools,* by Leonard P. Ayres, is an argument for a return to nature with a vengeance. It will set some of our American superintendents and school commissioners to thinking. (New York: Doubleday, Page & Co., 1910. 170 p. $1.20.)

A delightful series of literary essays will be found between the pages of *Longfellow and other essays,* by Professor William P. Trent of Columbia. Professor Trent has a detached and highly trained literary judgment, profound critical insight, and a charming style. (New York: Thomas Y. Crowell & Co., 1910. 245 p. $1.50.)

*The durable satisfactions of life,* by President Eliot, is written with all his elevation of thought and dignity of style. It will bear reading and re-reading. (New York: Thomas Y. Crowell & Co., 1910. 196 p. $1.00.)

Mr. Bardeen, whose inimitable style it is always a pleasure to read, has done a service by preserving and printing his reminiscences of the Civil War under the title of *A little fifer's war diary.* The book contains an amazing amount of material of general interest, and the illustrations are a liberal education in themselves. (Syracuse: C. W. Bardeen, 1910. 329 p. $3.00.)

Mr. William Allen White has printed in an attractive form the thoughtful and eloquent Phi Beta Kappa address delivered at Columbia University in 1910 under the title *A theory of spiritual progress.* (Emporia, Kans.: Gazette Press, 1910. 53 p.)

# XI

## NOTES AND NEWS

**The National Conference Committee on Standards of Colleges and Secondary Schools**

This REVIEW is glad to print the following report of the recent meeting of the National Conference Committee of Colleges and Secondary Schools which has been furnished for the purpose by the secretary:

The fifth annual meeting of the National Conference Committee on Standards of Colleges and Secondary Schools was held at the rooms of the Carnegie Foundation for the Advancement of Teaching, 576 Fifth Avenue, New York, N. Y., on Saturday, January 28, 1911.

All the organizations which send delegates to the conferences of this Committee were represented, those in attendance being as follows:

President George E. MacLean, The State University of Iowa, representing the National Association of State Universities.

Headmaster Wilson Farrand, Newark Academy, representing the College Entrance Examination Board.

Professor Nathaniel F. Davis, Brown University, representing the New England College Entrance Certificate Board.

Dean Herman V. Ames, The University of Pennsylvania, representing the Association of Colleges and Preparatory Schools of the Middle States and Maryland.

Principal Frederick L. Bliss, The University School of Detroit, representing the North Central Association of Colleges and Secondary Schools.

Chancellor James H. Kirkland, Vanderbilt University, representing the Association of Colleges and Preparatory Schools of the Southern States.

President Henry S. Pritchett, representing the Carnegie Foundation for the Advancement of Teaching.

Dr. Kendric C. Babcock, as substitute for Dr. Elmer E. Brown, the United States Commissioner of Education.

Dean Frederick C. Ferry, Williams College, representing the New England Association of Colleges and Preparatory Schools.

In its desire to help in the establishment of a uniform and convenient terminology, the Committee had requested a sub-committee to prepare a report for this meeting with regard to the use of the terms "hour," "count," "unit," "period," "exercise," "point," etc., in secondary schools and colleges. Mr. Farrand, chairman of the sub-committee, reported the results of the investigation which had been made and embodied these results in the following resolution, which was unanimously adopted:

*Resolved,* that this Committee recommends, as a matter of convenience and to secure uniformity:

(1) That the term *unit* be used only as a measure of work done in secondary schools, and that the term *period* be used to denote a recitation (or equivalent exercise) in a secondary school;

(2) That the term *hour* be restricted to use in measuring college work, and that the term *exercise* be used to denote a recitation, lecture, or laboratory period in a college;

(3) That *unit* be used as defined by this Committee, the Carnegie Foundation, and the College Entrance Examination Board, and that *hour* be used preferably in the sense of year-hour;

(4) That the use of other terms, such as *count, point, credit,* etc., in any of these senses be discontinued.

The sub-committee had been requested also to consider and report on the desirability of agreeing on the precise use of the terms "programs of study," "curriculum," and "courses of study." Mr. Farrand reported that this question had been carefully considered by his committee in the light of the published resolutions of the National Association of State Universities and of the Association of American Universities, and such further information as could be procured. While conscious of the desirability of uniformity in the use of these

terms, the sub-committee felt that it was unwise to take any action until some common usage should have become established in many institutions.

Following a discussion of the question of a combination of the examination and the certification methods of admission to college, Dean Ferry presented the following resolution, which was unanimously adopted:

*Resolved,* that this Committee indorses the movement of various colleges in the direction of attaching weight to the school record of each candidate in connection with his entrance examination, and recommends to the colleges that such records be regularly used as an aid in determining the candidate's fitness for admission to college.

The question of the proper use of the term " honorable dismissal " was considered at some length, and the Secretary was requested to obtain further information on the subject and to report at the next meeting.

Various questions proposed for discussion were laid on the table, and the sub-committee, consisting of Headmaster Farrand, chairman; Principal Bliss, President Pritchett, and Dean Ferry, was continued, with a request that it report again at the next meeting.

The officers of the past year were reelected as follows:

President, President George E. MacLean; Vice-President, Headmaster Wilson Farrand; Secretary-Treasurer, Dean Frederick C. Ferry.

The full report of the proceedings of the conference will be printed for distribution to the members of the associations which are represented in the Committee.

FREDERICK C. FERRY
*Secretary-Treasurer*

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It is said that Oxford is the only university in the world to maintain a professorship of poetry, and surely the recent history of the chair of poetry at Oxford has been distinguished and enviable in the extreme. Among those who have held the chair during the past half-century or a little more, are to

be found the names of Milman, Keble, Matthew Arnold, Sir Francis Doyle, Shairp, Palgrave, Courthope, Bradley, and Mackail. The books which represent Mr. Mackail's incumbency of the chair are fresh in the minds of all scholars.

The newly elected professor of poetry is the distinguished President of Magdalen College, Dr. Warren, who has just retired from the Vice-Chancellorship of the University.

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We fear that the residents of New London, Conn., are destined to disappointment, if a recently widely published newspaper dispatch is well founded. The dispatch stated that there was great enthusiasm in New London because the sum of $100,000 had been raised with which to endow a woman's college. Under present-day conditions the sum of $100,000 will just about endow a kindergarten.

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It is just announced from Berlin that the long desired University at Frankfort-on-the-Main is soon to be established. A suitable plan has been submitted to the Prussian Ministry, and the opening of the new institution is set for 1914. For the present, the new university will comprize but three faculties: a faculty of philosophy, a faculty of law, and a faculty of medicine.